# **AUTHOR INDEX**

Adachi, G., see Arakawa	33/34 (1988)	
Akimoto, M., see Gekka	33/34 (1988)	728
Akinaga, M. and T. Ueno, Possible high $T_c$ superconductivity and large	22 (24 (2000)	1010
fluctuation effect in Nb <sub>3</sub> Ge films	33/34 (1988)	1269
Alstrup, I. and P.J. Møller, X-ray photoelectron spectroscopy study of the		
vapor deposition of copper onto a MgO(100) surface	33/34 (1988)	
Arai, I., see Gotoh	33/34 (1988)	443
Arakawa, T., N. Suezawa, G. Adachi and J. Shiokawa, Dissociation of CO <sub>2</sub>		
on some rare earth metal thin films	33/34 (1988)	286
Arakawa, T. and G. Shimaoka, The epitaxial growth of ZnO thin films on		
cubic substrates	33/34 (1988)	501
Arbaoui, M., see Sella	33/34 (1988)	1208
Asahara, Y., H. Tokutaka, K. Nishimori, N. Ishihara, N. Makino, J. Le		
Héricy and J.P. Langeron, Surface composition analysis of Au-Cu alloy		
by micro-Auger electron spectroscopy	33/34 (1988)	107
Asai, Y., see Hatanaka	33/34 (1988)	792
Baba, S., see Yaguchi	33/34 (1988)	75
Baba, S., see Hirayama	33/34 (1988)	193
Bagus, P.S., see Hermann	33/34 (1988)	252
Balkanski, M., see Emery	33/34 (1988)	619
Balkanski, M., see Dzwonkowski	33/34 (1988)	838
Balkanski, M., Thin film technology for solid-state batteries	33/34 (1988)	1260
Barchewitz, R., see Sella	33/34 (1988)	1208
Bax, J.M.G., see Kuiper	33/34 (1988)	757
Beaulieu, R., see Sanchez-Quesada	33/34 (1988)	844
Bent, B.E., see Ohtani	33/34 (1988)	254
	, , , ,	
Cao, R., see Spicer	33/34 (1988)	1009
Case, C., see Sanchez-Quesada	33/34 (1988)	844
Chang, C.P., see Fang	33/34 (1988)	988
Chao, S.S., see Vook	33/34 (1988)	220
Chayahara, A., H. Yokoyama, T. Imura, Y. Osaka and M. Fujisawa, Proper-		
ties of BN thin films deposited by plasma CVD	33/34 (1988)	561
Chen, JR., SD. Chyou, SI. Lew, CJ. Huang, CS. Fang and WS. Tse,		
Investigations of the biological corrosion of condenser tubes by scanning		
Auger microprobe techniques	33/34 (1988)	212
Chen, JR., YK. Fang and SL. Hsu, Investigations of the growth of	, , , , , , , ,	
tungsten and tungsten silicides on SiO <sub>2</sub> substrates by low pressure CVD		
method	33/34 (1988)	578
	/ 5 . (2200)	

Chen, JR., see Fang	33/34 (1988)	989
Chyou, SD., see Chen	33/34 (1988)	
Conrad, R. and M. Harsdorff, Nucleation and growth of silicon on NaCl	33/34(1700)	414
(100) cleavage planes by RF sputtering	33/34 (1988)	492
Cordes, O. and M. Harsdorff, Investigation of gold clusters with photoelec-	33/ 34 (1700)	472
tron spectroscopy	33/34 (1988)	152
non specioscopy	33/ 34 (1766)	132
Deguchi, M., see Hamakawa	33/34 (1988)	1142
Ding, ZJ., R. Shimizu, T. Sekina and Y. Sakai, Theoretical and experimen-	, (,	
tal studies of $N(E)$ spectra in Auger electron spectroscopy	33/34 (1988)	99
Doi, T., see Kaito	33/34 (1988)	
Dzwonkowski, P., C. Julien and M. Balkanski, Structural and electrical	, (,	
properties of lithio-borate solid electrolyte thin films	33/34 (1988)	838
Ebisawa, S., see Nishikawa	33/34 (1988)	685
Emery, J.Y., C. Julien, M. Jouanne and M. Balkanski, Growth conditions	33/ 34 (1700)	005
and structure of polycrystalline InSe thin films	33/34 (1988)	610
and structure of polycrystainne mise than mins	33/34 (1966)	019
Fang, CS., see Chen	33/34 (1988)	212
Fang, C.S., W.S. Tse, C.P. Chang, K.F. Pai and JR. Chen, Hydrodynamical	, , ,	
theory of the LO-phonon-plasmon dispersion in Al <sub>x</sub> Ga <sub>1-x</sub> As	33/34 (1988)	988
Fang, C.S., W.S. Tse and C. Maloney, Re/Ir/W and Os/Ir/W alloy	, , , , , ,	
coatings on impregnated tungsten cathodes	33/34 (1988)	1189
Fang, YK., see Chen	33/34 (1988)	
Feldman, L.C., see Zinke-Allmang	33/34 (1988)	
Fujibayashi, K., see Ohagi	33/34 (1988)	
Fujii, S., M. Tobita, S. Furuta, S. Sakai and M. Umeno, Low temperature	, , , , , ,	
LPE growth and photoluminescence of InGaAsP on GaAsP	33/34 (1988)	1151
Fujikawa, H., see Fukao	33/34 (1988)	
Fujiki, N., see Okuyama	33/34 (1988)	
Fujisawa, M., see Chayahara	33/34 (1988)	561
Fujita, K., see Kaito	33/34 (1988)	
Fujiyasu, H., T. Sasaya, M. Katayama, K. Ishino, A. Ishida, H. Kuwabara, Y. Nakanishi and G. Shimaoka, Properties of CdS-ZnS superlattices	., ,	
prepared by hot wall epitaxy	33/34 (1988)	854
Fujiyasu, H., see Ishida	33/34 (1988)	
Fukao, R., H. Fujikawa and Y. Hamakawa, High-brightness low-driving-	33/ 34 (1700)	000
voltage green color thin-film electroluminescent devices	33/34 (1988)	1220
Fuke, S., see Imai	33/34 (1988)	
Fuke, S., see Imai	33/34 (1988)	
Fuke, S., see Imai	33/34 (1988)	
Fukui, M. and K. Oda, Studies on metal film growth through instantaneously	33/34 (1900)	054
observed attenuated total reflection spectra	33/34 (1988)	222
Fukushima, Y., see Uchiike	33/34 (1988)	
Furuta, S., see Fujii	33/34 (1988)	
Gekka, Y., M. Akimoto, T. Kita, Y. Ohtani and H. Kezuka, The effect of	22 (24 (2022)	720
oxygen on film deposition of a-Si:H by tetrode RF sputtering	33/34 (1988)	728
Girouard, F.E., VV. Truong and T. Yamaguchi, Optical properties of		0.50
granular copper systems	33/34 (1988)	
Gonzalez-Diaz, G., see Sanchez-Quesada	33/34 (1988)	844

Gotoh, Y., R.W. Vook and L. Moralez de la Garza, Characterization of Pd(111) films grown on mica and adsorption of oxygen and carbon	
monoxide on the films	33/34 (1988) 261
Gotoh, Y., M. Uwaha and I. Arai, Interpretation of the epitaxial orientation	
relationship at bcc(110)/fcc(111) interfaces  Grazhulis, V.A., New results in low temperature studies of semiconductor	33/34 (1988) 443
surfaces	33/34 (1988) 1
Grazhulis, V.A., A.M. Ionov and V.F. Kuleshov, Experimental investigation	33/ 34 (1900)
of the structure of clean cleaved surfaces of magnetic semiconductors	
EuX(100)	33/34 (1988) 81
Gupta, L., A. Mansingh and P.K. Srivastava, Band-gap narrowing in tin-	
doped indium oxide films	33/34 (1988) 898
Habraken, F.H.P.H., see Kuiper	33/34 (1988) 757
Habraken, F.H.P.M., see Oude Elferink	33/34 (1988) 765
Hagi, H., see Hayashi	33/34 (1988) 1001
Hagino, M., see Miyao	33/34 (1988) 364
Hagino, M., see Nomura	33/34 (1988) 1176
Hagiwara, R., see Ishii	33/34 (1988) 1324
Hamaguchi, H., see Ozaki	33/34 (1988) 1317
Hamakawa, Y., see Okuyama	33/34 (1988) 427
Hamakawa, Y., see Okuyama	33/34 (1988) 625
Hamakawa, Y., Current status of a-Si technology and its applications to	44 (44000) #04
optoelectronic devices	33/34 (1988) 705
Hamakawa, Y., D. Kruangam, M. Deguchi, Y. Hattori, T. Toyama and H.	22 (24 (1000) 1142
Okamoto, Visible light thin film LED made of a-SiC p-i-n junction Hamakawa, Y., see Fukao	33/34 (1988) 1142
Hamakawa, Y., see Hattori	33/34 (1988) 1229 33/34 (1988) 1276
Hanashima, S., see Nishikawa	33/34 (1988) 685
Hanawa, T., see Watamori	33/34 (1988) 51
Hanawa, T., see Shoji	33/34 (1988) 58
Hanawa, T., see Katayama	33/34 (1988) 129
Handa, S., see Ishii	33/34 (1988) 1107
Haneman, D. and D.H. Zhang, Special conductivity effects in amorphous	, , , , , , , , , , , , , , , , , , , ,
hydrogenated silicon	33/34 (1988) 692
Haneman, D., see Kristensen	33/34 (1988) 1285
Hara, M., see Yaji	33/34 (1988) 1244
Harada, K., see Yamaguchi	33/34 (1988) 31
Hariu, T., see Yamauchi	33/34 (1988) 862
Harsdorff, M., see Cordes	33/34 (1988) 152
Harsdorff, M., see Conrad	33/34 (1988) 492
Hasegawa, H., see He	33/34 (1988) 1030
Hasegawa, S., see Sukegawa	33/34 (1988) 1044
Hashimoto, H., see Urban III	33/34 (1988) 966
Hashimoto, M. and M. Matui, Effect of thin metal sublayers on the stability	22 (24 (1000) 026
of the amorphous phase of antimony layers	33/34 (1988) 826
Hatanaka, Y., see Meikle Hatanaka, Y., see Shimaoka	33/34 (1988) 750 33/34 (1988) 784
Hatanaka, Y., S. Kawai, Y. Suzuki, Y. Asai and G. Shimaoka, Silicon	33/34 (1700) 704
nitride/amorphous silicon interfaces in an MIS junction	33/34 (1988) 792
Hatta, A., see Suzuki	33/34 (1988) 875
account and day managery	20, 31 (1700) 013

Hattori, Y., see Hamakawa	33/34 (1988) 1142
Hattori, Y., D. Kruangam, T. Toyama, H. Okamoto and Y. Hama	
Highly conductive p-type microcrystalline SiC:H prepared by ECR 1	
CVD	33/34 (1988) 1276
Hayakawa, Y., see Kumagawa	33/34 (1988) 611
Hayashi, T., see Matsumoto	33/34 (1988) 342
Hayashi, T., see Suzuki Hayashi, Y., K. Hyodo and H. Hagi, Corrosion of Co-Ni and Co-Ni	33/34 (1988) 1051
sputtered films in high humidity atmospheres	33/34 (1988) 1001
Hayasi, K., see Nunogaki	33/34 (1988) 1135
He, L., H. Hasegawa, J. Luo and H. Ohno, Charge-discharge dynan	
disorder induced gap state continuum at compound semiconductor	
lator interfaces	33/34 (1988) 1030
Hermann, K. and P.S. Bagus, Size dependence of chemisorptive proj	, , , , , , , , , , , , , , , , , , , ,
based on surface cluster models: CO/Cu(100) and CO/Al(100)	33/34 (1988) 252
Hibino, Y., see Ishii	33/34 (1988) 1324
Higuchi, S., M. Ushio, Y. Nakanishi and K. Takahashi, The stru	octural
changes of ZnS:Mn thin films with post-deposition annealing	33/34 (1988) 667
Hirai, M., see Iwami	33/34 (1988) 1120
Hiraki, A., see Kawakami	33/34 (1988) 1059
Hiraki, A., see Ito	33/34 (1988) 1127
Hirao, S., see Uchiike	33/34 (1988) 661
Hirao, T., see Kamada	33/34 (1988) 1094
Hirashima, A., see Nagai	33/34 (1988) 335
Hirayama, H., S. Baba and A. Kinbara, Electron energy loss measure	ements
of In/Si(111) superstructures: correlation of the spectra with s	
superstructures	33/34 (1988) 193
Hirose, N., see Inushima	33/34 (1988) 420
Hiruta, Y., see Kitao	33/34 (1988) 812
Hisamoto, J., see Miura	33/34 (1988) 1253
Hiyamizu, S., see Sandhu	33/34 (1988) 400
Honjo, M., see Matsumoto	33/34 (1988) 342
Horikoshi, Y., see Yamaguchi	33/34 (1988) 406
Hsu, SL., see Chen	33/34 (1988) 578
Huang, CJ., see Chen	33/34 (1988) 212
Hyodo, K., see Hayashi	33/34 (1988) 1001
Iborra, E., see Sanchez-Quesada	33/34 (1988) 844
Ichimiya, A., see Mizuno	33/34 (1988) 38
Ichimiya, A., see Kohmoto	33/34 (1988) 45
Ichimiya, A., see Yasue	33/34 (1988) 167
Igasaki, Y., M. Ishikawa and G. Shimaoka, Some properties of Al-	, , ,
ZnO transparent conducting films prepared by RF reactive sputter	
Imai, T., S. Fuke, K. Mori and K. Kuwahara, Growth of GaAs epi layers prepared in the laboratory with an integrated safety MC	taxial
system	33/34 (1988) 587
Imai, T., S. Fuke, S. Kawarabayashi and K. Kuwahara, X-ray diffra	, , ,
studies on polycrystalline Zn <sub>3</sub> P <sub>2</sub> films deposited by hot-wall metho	
Imai, T., S. Fuke, K. Kasai and K. Kuwahara, Iodine-doping effects of	on the
hetero-epitaxial growth of ZnS on GaP substrate using VPE method	d 33/34 (1988) 654
	33/34 (1988) 719

Imura, T., see Chayahara	33/34 (1988)	561
Inaoka, K., K. Yase and M. Okada, Epitaxial growth of linear-chain mole-		
cules prepared by physical-vapour-deposition	33/34 (1988)	1293
Inaoka, K., see Saito	33/34 (1988)	1298
Inoue, K., see Okuyama	33/34 (1988)	427
Inoue, K., see Takeuchi	33/34 (1988)	905
Inoue, M., Y. Sugiyama, S. Nishigaki and T. Noda, Sequential SIMS-ISS measurements using a double focusing mass spectrometer	33/34 (1988)	138
Inoue, N. and Y. Yasuoka, Comparison of the properties of Ge thin films	33/ 34 (1700)	150
grown by plasma-assisted deposition with conventional vacuum evapora-		
tion	33/34 (1988)	632
Inuishi, Y., see Ohagi	33/34 (1988)	719
Inushima, T., N. Hirose, K. Urata, T. Sato and S. Yamazaki, Film growth	22 /24 /1000)	420
mechanism of photo-chemical vapor deposition	33/34 (1988)	
Inuzuka, T., see Sawabe	33/34 (1988)	
Inuzuka, T., see Kaneko	33/34 (1988)	
Ionov, A.M., see Grazhulis	33/34 (1988)	
Iriyama, K., see Ozaki	33/34 (1988)	
Ishi, S., see Ohno	33/34 (1988)	
Ishida, A., see Fujiyasu	33/34 (1988)	854
Ishida, A., Y. Sase and H. Fujiyasu, Optical properties of PbTe/Pb <sub>1-x</sub> Eu <sub>x</sub> Te		0.60
superlattices prepared by hot wall epitaxy	33/34 (1988)	
Ishigama, Y., see Komiyama	33/34 (1988)	
Ishihara, N., see Asahara	33/34 (1988)	
Ishihara, N., see Nishimori	33/34 (1988)	1216
Ishii, K., S. Handa and H. Terauchi, Sputtering of Cu in a high pressure	22 /24 /1000	1107
atmosphere	33/34 (1988)	1107
Ishii, K., S. Mitsumura, Y. Hibino, R. Hagiwara and H. Nakayama, Prepara-		
tion of phthalocyanine and octacyanophthalocyanine films by CVD on		
metal surfaces, and in situ observation of the molecular processes by	22 /24 /1000	1001
Raman spectroscopy	33/34 (1988)	
Ishii, M., see Mashita	33/34 (1988)	
Ishikawa, K., see Murakami	33/34 (1988)	
Ishikawa, K., see Nomura	33/34 (1988)	
Ishikawa, M., see Igasaki	33/34 (1988)	
Ishima, K., see Motoyama	33/34 (1988)	
Ishino, K., see Fujiyasu	33/34 (1988)	
Ishitani, A., see Nakayama	33/34 (1988)	
Itagaki, T., see Ota	33/34 (1988)	
Ito, H., see Miyatake	33/34 (1988)	
Ito, K. and T. Nakazawa, Atom-beam sputtered indium-tin oxide films	33/34 (1988)	913
Ito, T., A. Hiraki and M. Satou, Metal reactions to anodized porous silicon		
crystals	33/34 (1988)	
Itoh, H., see Muramatsu	33/34 (1988)	735
Itoh, N., K. Okamoto, H. Ogawa, T. Kawabata and S. Koike, Strains in		
$ZnS_xSe_{1-x}$ films grown on (001)-GaAs substrates	33/34 (1988)	413
Iwami, M., M. Hirai and M. Kusaka, Existence of an alloy formation		
reaction in the noble metal (thin film)-CdS (cleaved surface) contact		
system at room temperature	33/34 (1988)	
Iwasaki, T., see Ozaki	33/34 (1988)	
Izumi, T., see Kamada	33/34 (1988)	1094

Jiang, F.S., see Okuda	33/34 (1988)	797
Jiang Ji-bing, An experimental study of thin film layers in channel electron	33/ 34 (1700)	171
multipliers	33/34 (1988)	1183
Jouanne, M., see Emery	33/34 (1988)	
Julien, C., see Emery	33/34 (1988)	
Julien, C., see Dzwonkowski	33/34 (1988)	
Kaito, C., T. Doi, Y. Saito, K. Tanaka and K. Fujita, Studies on the structure	22 /24 /1000\	500
and the crystallization process of ion sputtered TiSe <sub>2</sub> films	33/34 (1988)	
Kaito, C., see Saito	33/34 (1988)	
Kajio, K., see Nishimori	33/34 (1988)	
Kajiyama, H., see Muramatsu	33/34 (1988)	
Kakimoto, A., see Nonaka	33/34 (1988)	
Kamada, M., see Kaneko	33/34 (1988)	546
Kamada, T., T. Hirao, M. Kitagawa, K. Setsune, K. Wasa and T. Izumi,		
Annealing behavior of silicon nitride and silicon oxynitride films pre-		
pared by ECR plasma CVD method	33/34 (1988)	
Kamimori, T., see Shigesato	33/34 (1988)	
Kamimura, Y., see Nishikawa	33/34 (1988)	685
Kamo, M., H. Yurimoto and Y. Sato, Epitaxial growth of diamond on		-
diamond substrate by plasma assisted CVD	33/34 (1988)	
Kanaji, T., see Urano	33/34 (1988)	
Kanda, Y. and K. Suzuki, Statistical model for piezoresistance in thin films	33/34 (1988)	996
Kaneko, H., M. Kamada, R. Kuwae, A. Sawabe and T. Inuzuka, Influence of substrate- and atmospheric-temperatures on diamond deposition	33/34 (1988)	546
Kaneko, K., T. Ohta, S. Ozeki, N. Kosugi and H. Kuroda, Chemisorption-assisted micropore filling of NO on Cu, Ni, and Co oxide-dispersed	, , ,	
activated carbon fibers	33/34 (1988)	
Kaneko, Y., see Ohmi	33/34 (1988)	646
Kasai, K., see Imai	33/34 (1988)	654
Kashihara, M., see Motoyama	33/34 (1988)	567
Kataoka, Y., see Tatsuyama	33/34 (1988)	457
Katayama, I., F. Shoji, K. Oura and T. Hanawa, An ISS/AES study of surface segregation of Cu-Mn and Cu-Ag alloy films in-situ deposited		
onto low temperature W substrates	33/34 (1988)	129
Katayama, M., see Fujiyasu	33/34 (1988)	
Katsube, T., see Suzuki	33/34 (1988)	325
Katsube, T., see Kobayashi	33/34 (1988)	
Katsube, T., see Yaji	33/34 (1988)	
Katsube, T., T. Yaji, K. Suzuki, S. Kobayashi, T. Kawaguchi and T. Shiro, LB film immobilized immunosensor with a charge detection type ampli-	, , ,	
fier	33/34 (1988)	1332
Kawabata, T., see Itoh	33/34 (1988)	
Kawaguchi, K., see Nozoye	33/34 (1988)	
Kawaguchi, T., see Katsube	33/34 (1988)	
Kawai, S., see Hatanaka	33/34 (1988)	
Kawakami, M., see Takeuchi	33/34 (1988)	
Kawakami, Y., T. Taguchi and A. Hiraki, Interface characteristics and	/()	
excitonic emissions in ZnSe-ZnSSe superlattices fabricated by low-pres-		
sure MOCVD	33/34 (1988)	1059
Kawamura, T., see Yamada	33/34 (1988)	
A	/()	

Kawamura, T., see Oshima	33/34 (1988) 1168
Kawarabayashi, S., see Imai	33/34 (1988) 594
Kawasaki, K., see Miki	33/34 (1988) 292
Kawasaki, K., see Sugai	33/34 (1988) 301
Kawashima, M., see Yamaguchi	33/34 (1988) 406
Kawazu, S., see Miyatake	33/34 (1988) 160
Kendelewicz, T., see Spicer	33/34 (1988) 1009
Kezuka, H., see Gekka	33/34 (1988) 728
Kimura, K., see Nakanishi	33/34 (1988) 677
Kinbara, A., see Yaguchi	33/34 (1988) 75
Kinbara, A., see Hirayama	33/34 (1988) 193
Kinoshita, H., Low-energy ion etching and oxidation of Si in O2 magnetron	
plasma	33/34 (1988) 1101
Kioka, T., see Miki	33/34 (1988) 292
Kioka, T., see Sugai	33/34 (1988) 301
Kishi, K., A. Yoshida and K. Koike, Nucleation and stability of a spherical	
particle growing with a liquid layer on the surface	33/34 (1988) 525
Kita, T., see Gekka	33/34 (1988) 728
Kitagawa, M., see Kamada	33/34 (1988) 1094
Kitajima, T., see Yamaguchi	33/34 (1988) 952
Kitao, M., S. Yamada, Y. Hiruta, N. Suzuki and K. Urabe, Electrochromic	,,
absorption spectra modulated by the composition of WO <sub>3</sub> /MoO <sub>3</sub> mixed	
films	33/34 (1988) 812
Kobayashi, J., see Komiyama	33/34 (1988) 206
Kobayashi, S., see Suzuki	33/34 (1988) 325
Kobayashi, S., K. Suzuki and T. Katsube, Changes of residual gas species in	, , , , ,
a vacuum chamber during electron bombardment	33/34 (1988) 370
Kobayashi, S., see Katsube	33/34 (1988) 1332
Kobayashi, Y., see Konishi	33/34 (1988) 173
Kobayashi, Y., see Oshima	33/34 (1988) 1168
Koganezawa, N., see Yamamoto	33/34 (1988) 1200
Kohmoto, S. and A. Ichimiya, Adsorption and desorption of Ag on the	
Si(111) surface	33/34 (1988) 45
Koike, K., see Kishi	33/34 (1988) 525
Koike, S., see Itoh	33/34 (1988) 413
Kokunai, S., see Muramatsu	33/34 (1988) 735
Komiyama, M., J. Kobayashi, Y. Ishigama, S. Morita and N. Mikoshiba, Scanning tunnelling microscopy images of noble metal fine particles	
supported on thin titanium oxide film	33/34 (1988) 206
Kondo, T., see Tatsuyama	33/34 (1988) 180
Konishi, R., Y. Kobayashi and H. Sasakura, Surface structure analysis of	/(/
titanium and amorphous TiFe by SEELFS and EAPFS	33/34 (1988) 173
Koshiba, S., see Motoyama	33/34 (1988) 567
Kosugi, N., see Kaneko	33/34 (1988) 355
Koyama, H., see Miyatake	33/34 (1988) 160
Krishnan, R., see Sella	33/34 (1988) 1208
K1istensen, R.D.L., S.N. Sahu and D. Haneman, Thin films of CuInSe <sub>2</sub> for	/(/
photoelectrochemical cells by flash evaporation	33/34 (1988) 1285
Kruangam, D., see Hamakawa	33/34 (1988) 1142
Kruangam, D., see Hattori	33/34 (1988) 1276
Kuiper, A.E.T., M.F.C. Willemsen, J.M.G. Bax and F.H.P.H. Habraken,	, ()
Oxidation behaviour of LPCVD silicon oxynitride films	33/34 (1988) 757
Chiamon Committee of the City Simon Cajming Ining	00, 54 (1000) 151

W. C. A. P. T O. J. PM. JL.	22 /24 /1000\ 765
Kuiper, A.E.T., see Oude Elferink	33/34 (1988) 765
Kuleshov, V.F., see Grazhulis	33/34 (1988) 81
Kumagawa, M., T. Ozawa and Y. Hayakawa, A new technique for the	22 /24 /1099) 611
growth of III-V mixed crystal layers	33/34 (1988) 611 33/34 (1988) 1307
Kunitake, T., see Nakayama Kuroda, H., see Namba	33/34 (1988) 187
	33/34 (1988) 355
Kuroda, H., see Kaneko	33/34 (1988) 58
Kuroi, T., see Shoji	33/34 (1988) 1120
Kusaka, M., see Iwami	33/34 (1988) 854
Kuwabara, H., see Fujiyasu	33/34 (1988) 546
Kuwae, R., see Kaneko	33/34 (1988) 587
Kuwahara, K., see Imai	33/34 (1988) 594
Kuwahara, K., see Imai	33/34 (1988) 654
Kuwahara, K., see Imai	33/34 (1966) 034
Lafait, J., see Sella	33/34 (1988) 942
Langeron, J.P., see Asahara	33/34 (1988) 107
Le Héricy, J., see Asahara	33/34 (1988) 107
Levenson, L.L., see Urban III	33/34 (1988) 966
Lew, SI., see Chen	33/34 (1988) 212
Lilienthal-Weber, Z., see Spicer	33/34 (1988) 1009
Lindau, I., see Spicer	33/34 (1988) 1009
Loferski, J.J., see Sanchez-Quesada	33/34 (1988) 844
Luo, J., see He	33/34 (1988) 1030
	22 (24 (1000) 1000
Maeda, T., see Saito	33/34 (1988) 1088
Maeyama, S., see Yamada	33/34 (1988) 1073
Maeyama, S., see Oshima	33/34 (1988) 1168
Mahanty, J., N.H. March and B.V. Paranjape, Interaction between rare gas	22 (24 (1000) 200
atoms outside metal surfaces: role of plasma excitations	33/34 (1988) 309
Makino, N., see Asahara	33/34 (1988) 107
Maloney, C., see Fang	33/34 (1988) 1189
Mansingh, A., see Gupta	33/34 (1988) 898
March, N.H., see Mahanty	33/34 (1988) 309
Martil, I., see Sanchez-Quesada	33/34 (1988) 844
Masai, M., see Nishiyama	33/34 (1988) 1081
Mashita, M., M. Shimazu, M. Ishii and M. Tsuda, Ultraviolet light irradia-	
tion effects on silicon doping into GaAs using disilane in OMVPE	33/34 (1988) 602
Masuda, M., see Namba	33/34 (1988) 187
Mate, C.M., see Ohtani	33/34 (1988) 254
Matsubara, S., see Muramatsu	33/34 (1988) 735
Matsuhiro, K., see Shigesato	33/34 (1988) 804
Matsumoto, K., T. Hayashi, M. Honjo and G. Shimaoka, The role of water	
vapor adsorbed on the surface in the growth of ZnO crystal	33/34 (1988) 342
Matsumoto, K., see Takaki	33/34 (1988) 919
Matsumoto, M., see Yasuda	33/34 (1988) 1066
Matsuo, K. and K. Nakano, Performances of platinum metal catalysts supported on titania coated silica prepared from metal organics	33/34 (1988) 269
	33/34 (1988) 797
Matsushita, T., see Okuda Matui, M., see Hashimoto	33/34 (1988) 826
McCants, C., see Spicer	33/34 (1988) 1009
meano, e., see spicer	33/34 (1700) 1009

Meikle, S.G., Y. Hatanaka, Y. Suzuki and G. Shimaoka, Energy band		
discontinuities in the a-SiN <sub>x</sub> /c-Si heterojunction	33/34 (1988)	750
Mihama, K., see Tanaka	33/34 (1988)	472
Mihama, K., N. Tanaka and Y. Saito, Growth of Al-Mn quasi-crystals by		
vacuum deposition	33/34 (1988)	531
Miki, H., H. Nagase, T. Nagase, T. Kioka, S. Sugai and K. Kawasaki,		
Chemisorption of NO on polycrystalline Pd surface studied by TDS,	22 /24 /1000)	202
AES, UPS and XPS	33/34 (1988)	
Miki, H., see Sugai	33/34 (1988)	
Mikoshiba, N., see Komiyama	33/34 (1988)	
Mitsumura, S., see Ishii	33/34 (1988)	1324
Miura, N., J. Hisamoto, N. Yamazoe, LaF <sub>3</sub> sputtered film sensor for detect-	22 /24 /1000)	1262
ing oxygen at room temperature	33/34 (1988)	
Miyahara, T., see Yamada	33/34 (1988)	
Miyahara, T., see Oshima	33/34 (1988)	
Miyamoto, I., see Ohmi	33/34 (1988)	
Miyano, K., see Spicer	33/34 (1988)	1009
Miyao, M., T. Wada, T. Nitta and M. Hagino, The state of Cs on negative	22 /24 /1000	264
electron affinity surfaces	33/34 (1988)	
Miyao, M., see Nomura	33/34 (1988)	11/0
Miyatake, H., T. Nishioka, H. Ito, H. Koyama, S. Kawazu and M. Nomura,	22 /24 /1000\	160
EXAFS study on tungsten silicide films	33/34 (1988)	
Miyazaki, K., see Nunogaki	33/34 (1988)	1133
Mizuno, S. and A. Ichimiya, RHEED study of alkali metals on Si(111)	22 (24 (1000)	20
surface	33/34 (1988)	
Møller, P.J., see Alstrup	33/34 (1988)	
Moralez de la Garza, L., see Gotoh	33/34 (1988)	
Mori, K., see Imai	33/34 (1988)	38/
Morisaki, H. and K. Yazawa, Electrochemical and electrochromic aspects of	22 /24 /1000)	010
porous titania glass	33/34 (1988)	
Morita, S., see Komiyama	33/34 (1988)	
Morosawa, K., see Takeuchi	33/34 (1988)	912
Motoyama, M., K. Ishima, M. Kashihara and S. Koshiba, Formation and	22 /24 /2000)	5.00
structure of ceramic thin films deposited by ion beam sputtering Murakami, K., T. Takeuchi, K. Ishikawa and T. Yamamoto, Characteriza-	33/34 (1988)	30/
tion of silicon nitride films formed in an RF glow discharge	33/34 (1988)	742
Muramatsu, S., S. Kokunai, Y. Nishino, H. Kajiyama, S. Matsubara, H. Itoh,	55/51(2555)	
N. Nakamura and T. Shimada, Photoelectric and structural properties of		
a-Si <sub>1-x</sub> Ge <sub>x</sub> :H alloys prepared using Si <sub>2</sub> H <sub>6</sub> and GeH <sub>4</sub>	33/34 (1988)	735
Murayama, A., see Shigesato	33/34 (1988)	
and the state of t	, (,	
Nagai, K., see Ohno	33/34 (1988)	238
Nagai, K. and A. Hirashima, Zero-order desorption kinetics observed in		
phase coexistence regions in adsorbates	33/34 (1988)	
Nagai, T., see Niigaki	33/34 (1988)	
Nagasaka, H., see Takeuchi	33/34 (1988)	
Nagasaka, H., see Takeuchi	33/34 (1988)	
Nagase, H., see Miki	33/34 (1988)	
Nagase, T., see Miki	33/34 (1988)	292
Nagashima, S. and I. Ogura, The structure of overlayers of Se on Cu(111)		
surfaces	33/34 (1988)	450

Nakagawa, Y., see Yaji	33/34 (1988) 1244
Nakahara, T., see Watamori	33/34 (1988) 51
Nakamura, N., see Muramatsu	33/34 (1988) 735
Nakamura, T., Y. Suzuki, N. Saito, Y. Nakanishi and G. Shimaoka, Electron	
spin resonance observations of Ar+-irradiated a-Si <sub>1-x</sub> C <sub>x</sub> :H films	33/34 (1988) 779
Nakanishi, Y., see Higuchi	33/34 (1988) 667
Nakanishi, Y., K. Kimura, G. Shimaoka and M. Ogita, Epitaxial growth of	
ZnS:Mn/Y <sub>2</sub> O <sub>3</sub> /ZnS/Si(100) multilayer thin films	33/34 (1988) 677
Nakanishi, Y., see Nakamura	33/34 (1988) 779
Nakanishi, Y., see Fujiyasu	33/34 (1988) 854
Nakano, J., see Suzuki	33/34 (1988) 1051
Nakano, K., see Matsuo	33/34 (1988) 269
Nakashima, H., see Uchida	33/34 (1988) 1037
Nakata, J., see Ohagi	33/34 (1988) 719
Nakata, Y., see Sandhu	33/34 (1988) 400
Nakayama, H., see Ishii	33/34 (1988) 1324
Nakayama, Y., T. Takahagi, F. Soeda, A. Ishitani, M. Shimomura, K.	
Okuyama and T. Kunitake, XPS study of oriented organic molecules. The	
single crystal of an arobenzene-containing alkyl ammonium amphiphile	33/34 (1988) 1307
Nakazawa, T., see Ito	33/34 (1988) 913
Namba, H., M. Masuda and H. Kuroda, Electronic states of 2×1 recon-	
structed surfaces of diamond(111) studied by UPS and EELS	33/34 (1988) 187
Narusawa, T., see Uchida	33/34 (1988) 1037
Nesterenko, B.A., Si(110) + Ni system: structural, vibrational and electronic	
properties	33/34 (1988) 21
Newman, N., see Spicer	33/34 (1988) 1009
Nihashi, T., see Niigaki	33/34 (1988) 1160
Niigaki, M., T. Nagai, M. Ota, T. Nihashi and K. Oba, MOCVD growth of	
GaAs, AlGaAs and its application to transmission photocathodes	33/34 (1988) 1160
Nishigaki, S., see Inoue	33/34 (1988) 138
Nishikawa, E., T. Sugita, S. Ebisawa, M. Tsujimoto, H. Ohki, Y. Kamimura	
and S. Hanashima, Industrial fine adjustment of the resonant frequency	
of a quartz crystal wafer by Penning discharge sputtering	33/34 (1988) 685
Nishimori, K., see Asahara	33/34 (1988) 107
Nishimori, K., K. Kajio, H. Tokutaka, Y. Noishiki and N. Ishihara, Prepara-	
tion of magnetron-sputtered Ag-Zn alloy films for an casable optical-disk	33/34 (1988) 1216
Nishino, Y., see Muramatsu	33/34 (1988) 735
Nishioka, T., see Miyatake	33/34 (1988) 160
Nishiyama, S., K. Yoshioka, T. Yoshida, S. Tsuruya and M. Masai, Highly	, , , ,
active surfaces of noble metals by thermal treatment under UHV	33/34 (1988) 1081
Nitta, T., see Miyao	33/34 (1988) 364
Noda, T., see Inoue	33/34 (1988) 138
Noishiki, Y., see Nishimori	33/34 (1988) 1216
Nomura, M., see Miyatake	33/34 (1988) 160
Nomura, T., M. Miyao, K. Ishikawa, Y. Suzuki and M. Hagino, Accommodations and initial growth stages of GaAs/GaP and GaP/GaAs by MBE	33/34 (1988) 1176
Nonaka, S. and A. Kakimoto, Dielectric property measurements of thin film	
specimens  Negroup H V Varyagushi and S Ship Ultra high vacquum denosition of	33/34 (1988) 980
Nozoye, H., K. Kawaguchi and S. Shin, Ultra-high vacuum deposition of $Ti_nO_{2n-1}$ -Ni multilayers. Application of a pulsed molecular beam source	
to synthesize designed ceramic films	33/34 (1988) 640

Nunogaki, M., H. Suezawa, K. Hayasi and K. Miyazaki, Plasma source	22 /24 /1000	1126
nitriding	33/34 (1988)	1133
Oba, K., see Niigaki	33/34 (1988)	1160
Oda, K., see Fukui	33/34 (1988)	
Ogawa, H., see Itoh	33/34 (1988)	
Ogawa, S., see Suzuki	33/34 (1988)	
Ogita, M., see Nakanishi	33/34 (1988)	
Ogura, I., see Nagashima	33/34 (1988)	
Ohagi, H., M. Yamazaki, J. Nakata, S. Imao, J. Shirafuji, K. Fujibayashi and Y. Inuishi, Staebler-Wronski effect in a-Si:H films with different mor-	33/34 (1906)	430
phology	33/34 (1988)	719
Ohishi, K., see Uchiike	33/34 (1988)	661
Ohki, H., see Nishikawa	33/34 (1988)	685
Ohmi, F., A. Watada, I. Miyamoto and Y. Kaneko, The preparation of		
Co—Ti substituted Ba-ferrite films	33/34 (1988)	646
Ohnishi, S., see Satoko	33/34 (1988)	277
Ohno, H., see He	33/34 (1988)	1030
Ohno, Y., T. Toya, S. Ishi and K. Nagai, Theory of angular and speed	, , , ,	
distributions of desorbed hydrogen from metal surfaces	33/34 (1988)	238
Ohsaki, H., see Tada	33/34 (1988)	773
Ohta, T., see Kaneko	33/34 (1988)	355
Ohtani, H., B.E. Bent, C.M. Mate, M.A. Van Hove and G.A. Somorjai, Structure determination with HREELS and LEED: the molecular struc-		
ture of chemisorbed benzene on Pd(111)	33/34 (1988)	254
Ohtani, S., see Yasue	33/34 (1988)	167
Ohtani, Y., see Gekka	33/34 (1988)	728
Oishi, K., see Sunada	33/34 (1988)	434
Okada, K., M. Uemura and A. Okitsu, Clean surfaces of metals prepared by		
scribing with a diamond tip	33/34 (1988)	112
Okada, M., see Inaoka	33/34 (1988)	1293
Okada, M., see Saito	33/34 (1988)	1298
Okamoto, A., see Suyama	33/34 (1988)	1236
Okamoto, H., see Hamakawa	33/34 (1988)	1142
Okamoto, H., see Hattori	33/34 (1988)	1276
Okamoto, K., see Itoh	33/34 (1988)	413
Okamoto, K., see Sunada	33/34 (1988)	434
Okano, T., see Sakurai	33/34 (1988)	245
Okitsu, A., see Okada	33/34 (1988)	112
Okuda, M., F.S. Jiang, J.C. Rhee, H. Takenoshita and T. Matsushita, Studies on the amorphous-crystalline reversible phase transition of Te-Se-Ga		
thin film alloys	33/34 (1988)	797
Okuyama, K., see Nakayama	33/34 (1988)	1307
Okuyama, M., N. Fujiki, K. Inoue and Y. Hamakawa, SiO <sub>2</sub> film growth by double-excitation photo-CVD using Si <sub>3</sub> H <sub>8</sub> and O <sub>2</sub>	33/34 (1988)	427
Okuyama, M., Y. Togami and Y. Hamakawa, Microwave effect in RF		
magnetron sputtering of PbTiO <sub>3</sub>	33/34 (1988)	
Osaka, Y., see Chayahara	33/34 (1988)	
Osawa, M., see Suzuki	33/34 (1988)	875
Osawa, M., S. Yamamoto and W. Suëtaka, Surface enhanced Raman scatter-		
ing of molecules within small cavities in evaporated silver films	33/34 (1988)	890

Oshima, M., see Suzuki Oshima, M., see Yamada	33/34 (1988) 33/34 (1988)	
Oshima, M., Y. Kobayashi, T. Kawamura, S. Maeyama, Y. Shinoda and T.	33/ 34 (1700)	1075
Miyahara, Synchrotron radiation photoemission spectroscopy of Ga-in-		
sulator interfaces for GaAs lateral epitaxial growth	33/34 (1988)	1168
Ota, M., see Niigaki	33/34 (1988)	1160
Ota, T. and T. Itagaki, Relationships between the initial growth of a Ga film		
and the surface structure of cleaved (100)NaCl	33/34 (1988)	484
Oude Elferink, J.B., F.H.P.M. Habraken, W.F. van der Weg and A.E.T.		
Kuiper, Hydrogen in oxidized silicon oxynitride thin films	33/34 (1988)	765
Oura, K., see Watamori	33/34 (1988)	51
Oura, K., see Shoji	33/34 (1988)	
Oura, K., see Katayama	33/34 (1988)	129
Ozaki, Y., K. Iriyama, T. Iwasaki and H. Hamaguchi, Resonance Raman study of mono- and multilayer Langmuir-Blodgett films of merocyanine		
J-aggregates	33/34 (1988)	1317
Ozawa, S., see Takeuchi	33/34 (1988)	
Ozawa, T., see Kumagawa	33/34 (1988)	
Ozeki, S., see Kaneko	33/34 (1988)	355
Pai, K.F., see Fang	33/34 (1988)	988
Pak, K., see Yasuda	33/34 (1988)	1066
Pang Shijing, see Xu Minsheng	33/34 (1988)	315
Paranjape, B.V., see Mahanty	33/34 (1988)	309
Rhee, J.C., see Okuda	33/34 (1988)	797
Robins, J.L., Thin film nucleation and growth kinetics	33/34 (1988)	379
Sahu, S.N., see Kristensen	33/34 (1988)	1285
Saijo, H., An electron energy-loss spectroscopy for depth analysis of a very		
shallow surface layer	33/34 (1988)	199
Saito, N., see Nakamura	33/34 (1988)	779
Saito, S., T. Maeda, T. Soumura and K. Takeda, Temperature variation of		
the work function of sputter cleaned polycrystalline cobalt	33/34 (1988)	
Saito, Y., see Kaito	33/34 (1988)	
Saito, Y., see Mihama	33/34 (1988)	531
Saito, Y., K. Inaoka, C. Kaito and M. Okada, Molecular energetics of the growth mechanism of stearic acid thin films prepared by vacuum-deposi-		
tion	33/34 (1988)	
Sakai, M., see Yamaguchi	33/34 (1988)	
Sakai, S., see Fujii	33/34 (1988)	
Sakai, Y., see Ding	33/34 (1988)	99
Sakurai, M., T. Okano and Y. Tuzi, Ortho-para conversion of n-H <sub>2</sub> physisorbed on Ag(111) near two-dimensional condensation conditions	33/34 (1988)	245
Sanchez-Quesada, F., C. Case, G. Gonzalez-Diaz, I. Martil, J. Santamaria, E. Iborra, R. Beaulieu and J.J. Loferski, Effects of argon partial pressure and hydrogen admixtures on the properties of sputtered CuInSe <sub>2</sub> thin		
and hydrogen admixtures on the properties of sputtered Curinse <sub>2</sub> thin films	33/34 (1988)	844

Sandhu, A., Y. Nakata, S. Sasa and S. Hiyamizu, In <sub>0.53</sub> Ga <sub>0.47</sub> As-In <sub>0.52</sub> (Ga <sub>1-x</sub> Al <sub>x</sub> ) <sub>0.48</sub> As quasi-parabolic (multi-stepped) quantum wells grown		
by the pulsed molecular beam method	33/34 (1988)	400
Santamaria, J., see Sanchez-Quesada	33/34 (1988)	
Sasa, S., see Sandhu	33/34 (1988)	
Sasaki, S., see Yamamoto	33/34 (1988)	
Sasakura, H., see Konishi	33/34 (1988)	
Sasaya, T., see Fujiyasu	33/34 (1988)	
Sase, Y., see Ishida	33/34 (1988)	
Sato, M., FEM study of surface diffusion of the O <sub>2</sub> -W adsorption system	33/34 (1988)	
Sato, N., see Seo	33/34 (1988)	
Sato, T., see Inushima	33/34 (1988)	
Sato, Y., see Kamo	33/34 (1988)	
Satoko, C., S. Ohnishi and Tian Zeng-ju, Chemisorption and silicide forma-	/()	
tion processes of transition metals Ti,V, Cr, Fe, and Ni on Si(111) surfaces	22 /24 /1000	277
	33/34 (1988)	
Satou, M., see Ito	33/34 (1988)	112/
Sawabe, A., H. Yasuda, T. Inuzuka and K. Suzuki, Growth of diamond thin	22 /24 /2000	E20
films in a DC discharge plasma	33/34 (1988)	
Sawabe, A., see Kaneko	33/34 (1988)	
Sekina, T., see Ding	33/34 (1988)	99
Sella, C. and J. Lafait, Adjustable selective profiles using cermet absorbing		
films	33/34 (1988)	942
Sella, C., K. Youn, R. Barchewitz, M. Arbaoui and R. Krishnan, Structure		
and properties of W/C and Ni/C multilayer films	33/34 (1988)	1208
Seo, M., K. Takemasa and N. Sato, Depth-profiling of metal oxide films		
prepared with MOCVD	33/34 (1988)	
Serikawa, T., see Suyama	33/34 (1988)	
Setsune, K., see Kamada	33/34 (1988)	1094
Shigesato, Y., A. Murayama, T. Kamimori and K. Matsuhiro, Characterization of evaporated amorphous WO <sub>3</sub> films by Raman and FTIR spec-		
troscopies	33/34 (1988)	804
Shimada, T., see Muramatsu	33/34 (1988)	735
Shimaoka, G., see Matsumoto	33/34 (1988)	342
Shimaoka, G., see Arakawa	33/34 (1988)	501
Shimaoka, G., see Nakanishi	33/34 (1988)	677
Shimaoka, G., see Meikle	33/34 (1988)	750
Shimaoka, G., see Nakamura	33/34 (1988)	779
Shimaoka, G.,Y. Suzuki and Y. Hatanaka, XPS study of a-Si <sub>x</sub> O <sub>y</sub> :H and a-Si <sub>x</sub> N <sub>y</sub> :H thin films	33/34 (1988)	784
Shimaoka, G., see Hatanaka	33/34 (1988)	
Shimaoka, G., see Fujiyasu	33/34 (1988)	
Shimaoka, G., see Fujiyasu Shimaoka, G., see Igasaki	, , ,	
Shimazu, M., see Mashita	33/34 (1988) 33/34 (1988)	
Shimazu, S., see Mashita Shimazu, S., see Sunada	,	
	33/34 (1988)	
Shimizu, R., see Ding	33/34 (1988)	
Shimomura, M., see Nakayama	33/34 (1988)	
Shin, S., see Nozoye	33/34 (1988)	
Shinoda, Y., see Oshima	33/34 (1988)	
Shiokawa, J., see Arakawa	33/34 (1988)	
Shirafuji, J., see Ohagi	33/34 (1988)	/19

Shiro, T., see Katsube	33/34 (1988) 1332
Shoji, F., see Watamori	33/34 (1988) 51
Shoji, F., T. Kuroi, M. Watamori, K. Oura and T. Hanawa, Capture of A	, , ,
atoms in defects produced by low-energy Ar ion bombardment on the	
Si(111) surface	33/34 (1988) 58
Shoji, F., see Katayama	33/34 (1988) 129
Soeda, F., see Nakayama	33/34 (1988) 1307
Somorjai, G.A., see Ohtani	33/34 (1988) 254
Soumura, T., see Saito	33/34 (1988) 1088
Spicer, W.E., T. Kendelewicz, N. Newman, R. Cao, C. McCants, K. Miyano	0,
I. Lindau, Z. Lilienthal-Weber and E.R. Weber, The advanced unifie	ed
defect model and its applications	33/34 (1988) 1009
Srivastava, P.K., see Gupta	33/34 (1988) 898
Suëtaka, W., see Suzuki	33/34 (1988) 875
Suëtaka, W., see Osawa	33/34 (1988) 890
Suezawa, H., see Nunogaki	33/34 (1988) 1135
Suezawa, N., see Arakawa	33/34 (1988) 286
Sugai, S., see Miki	33/34 (1988) 292
Sugai, S., H. Yoshikawa, H. Miki, T. Kioka and K. Kawasaki, States of No.	
adsorbed on W(100), (110) and (111) studied by electron stimulate	ed
desorption	33/34 (1988) 301
Sugita, T., see Nishikawa	33/34 (1988) 685
Sugiyama, Y., see Inoue	33/34 (1988) 138
Sukegawa, T., S. Takeuchi, S. Hasegawa, H. Ueno and A. Tanaka, Measure ment of optical-absorption coefficient and minority carrier diffusio	
length in GaAs <sub>1-x</sub> P <sub>x</sub> Schottky-barrier photodiodes	33/34 (1988) 1044
Sunada, J., K. Okamoto, K. Oishi and S. Shimazu, UV photo-oxidation of T	e e
films (photon energy dependence)	33/34 (1988) 434
Suyama, S., A. Okamoto and T. Serikawa, High-quality gate-oxide films for	or
MOSFET's deposited by oxygen-argon sputtering	33/34 (1988) 1236
Suzuki, K., S. Kobayashi and T. Katsube, Cross sections of electron stimu	1-
lated desorption under technical vacuum conditions and 1 to 3 ke'	V
electron energies	33/34 (1988) 325
Suzuki, K., see Kobayashi	33/34 (1988) 370
Suzuki, K., see Sawabe	33/34 (1988) 539
Suzuki, K., see Takaki	33/34 (1988) 919
Suzuki, K., see Kanda	33/34 (1988) 996
Suzuki, K., see Katsube	33/34 (1988) 1332
Suzuki, M., T. Hayashi, M. Oshima, M. Wada and J. Nakano, Photoemissio	, , , , , , , , , , , , , , , , , , , ,
study of Schottky barriers formed on PbIn alloys by plasma oxidation	33/34 (1988) 1051
Suzuki, N., see Kitao	33/34 (1988) 812
Suzuki, Y., see Meikle	33/34 (1988) 750
Suzuki, Y., see Nakamura	33/34 (1988) 779
Suzuki, Y., see Shimaoka	33/34 (1988) 784
Suzuki, Y., see Hatanaka	33/34 (1988) 792
Suzuki, Y., M. Osawa, A. Hatta and W. Suëtaka, Mechanism of absorption enhancement in infrared ATR spectra observed in the Kretschman.	n
configuration	33/34 (1988) 875
Suzuki, Y., T. Yotsuya, K. Takiguchi, M. Yoshitake and S. Ogawa, The effect	
of charged particles when preparing ZnO thin film by ion beam sputter ing deposition	

Swirbel, T.J., see Vook	33/34 (1988) 220
The William Control of the Control of Contro	
Tada, M., H. Ohsaki, Formation mechanism of evaporated a-SiO <sub>2</sub> :	
approach from the oxidation processes of a-Si	33/34 (1988) 773
Taguchi, S., see Yamamoto	33/34 (1988) 1200
Taguchi, T., see Kawakami	33/34 (1988) 1059
Takagi, T., see Urban III	33/34 (1988) 966
Takahagi, T., see Nakayama	33/34 (1988) 1307
Takahashi, K., see Higuchi	33/34 (1988) 667
Takaki, S., K. Matsumoto and K. Suzuki, Properties of highly conducti	
ITO films prepared by ion plating	33/34 (1988) 919
Takeda, K., see Saito	33/34 (1988) 1088
Takemasa, K., see Seo	33/34 (1988) 120
Takenoshita, H., see Okuda	33/34 (1988) 797
Takeuchi, M., K. Inoue, S. Ozawa and H. Nagasaka, Photoconduct	
properties of ultrafine indium oxide particle layers	33/34 (1988) 905
Takeuchi, M., F.L. Weichman, K. Morosawa, M. Kawakami and Nagasaka, Photoelectrochemical behavior of Cu <sub>2</sub> O single crystals	
liquid electrolytes	33/34 (1988) 972
Takeuchi, S., see Sukegawa	33/34 (1988) 1044
Takeuchi, T., see Murakami	33/34 (1988) 742
Takiguchi, K., see Suzuki	33/34 (1988) 1114
Tanaka, A., see Sukegawa	33/34 (1988) 1044
Tanaka, K., see Kaito	33/34 (1988) 509
Tanaka, N. and K. Mihama, High resolution electron microscopy a	
microdiffraction of metal-MgO composite films	33/34 (1988) 472
Tanaka, N., see Mihama	33/34 (1988) 531
Tatsuyama, C., H. Ueba and T. Kondo, Low-energy-electron-loss spe	
troscopy of thin Ge layers on a GaAs(100) surface	33/34 (1988) 180
Tatsuyama, C., H. Ueba and Y. Kataoka, Heteroepitaxy of Ge films	
Si(100) surface	33/34 (1988) 457
Terauchi, H., see Ishii	33/34 (1988) 1107
Tian Zeng-ju, see Satoko	33/34 (1988) 277
Tobita, M., see Fujii	33/34 (1988) 1151
Togami, Y., see Okuyama	33/34 (1988) 625
Tokutaka, H., see Asahara	33/34 (1988) 107
Tokutaka, H., see Nishimori	33/34 (1988) 1216
Toya, T., see Ohno	33/34 (1988) 238
Toyama, T., see Hamakawa	33/34 (1988) 1142
Toyama, T., see Hattori	33/34 (1988) 1276
Truong, VV., see Yamaguchi	33/34 (1988) 952
Truong, VV., see Girouard	33/34 (1988) 959
Tse, WS., see Chen	33/34 (1988) 212
Tse, W.S., see Fang	33/34 (1988) 988
Tse, W.S., see Fang	33/34 (1988) 1189
Tsong, T.T., Atomic structure and compositional analysis of solid surface	
using pulsed-laser ToF atom-probe and field ion microscopy	33/34 (1988) 15
Tsuda, M., see Mashita	33/34 (1988) 602
Tsujimoto, M., see Nishikawa	33/34 (1988) 685
	20/ 54 (1700) 005
Tsuruya, S., see Nishiyama	33/34 (1988) 1081

Uchida, Y., T. Yokotsuka, T. Narusawa and H. Nakashima, Formation and		
characteristics of LaB <sub>6</sub> /GaAs(001) Schottky barrier	33/34 (1988)	1037
Uchiike, H., S. Hirao, K. Ohishi and Y. Fukushima, Characterization of		
electron beam evaporated ZnS:Mn thin films by using particle induced	00 (04 (1000)	
X-ray emission analysis	33/34 (1988)	
Ueba, H., see Tatsuyama	33/34 (1988)	
Ueba, H., see Tatsuyama	33/34 (1988)	
Uemura, M., see Okada	33/34 (1988)	
Ueno, H., see Sukegawa	33/34 (1988)	
Ueno, T., see Akinaga	33/34 (1988)	
Umeno, M., see Fujii	33/34 (1988)	
Urabe, K., see Kitao	33/34 (1988)	812
Urano, T. and T. Kanaji, Structures of iron films deposited on Si(111)7 × 7		
surface studied by LEED	33/34 (1988)	
Urata, K., see Inushima	33/34 (1988)	420
Urban III, F.K., Ellipsometer measurement of thickness and optical proper-		
ties of thin absorbing films	33/34 (1988)	934
Urban III, F.K., L.L. Levenson, H. Hashimoto, H. Usui, I. Yamada and T.		
Takagi, Optical properties of reactive ICB aluminum oxide films deposited		
on Si(100)	33/34 (1988)	966
Ushio, M., see Higuchi	33/34 (1988)	667
Usui, H., see Urban III	33/34 (1988)	966
Utsunomiya, M. and A. Yoshida, Piezoresistive effect of hydrogenated		
microcrystalline silicon films	33/34 (1988)	1222
Uwaha, M., see Gotoh	33/34 (1988)	443
Van der Weg, W.F., see Oude Elferink	33/34 (1988)	765
Van Hove, M.A., see Ohtani	33/34 (1988)	254
Vook, R.W., T.J. Swirbel and S.S. Chao, Work function changes in the		
(111)Pd/(111)Cu and CO/(111)Pd/(111)Cu systems	33/34 (1988)	220
Vook, R.W., see Gotoh	33/34 (1988)	261
Wada, M., see Suzuki	33/34 (1988)	1051
Wada, T., see Miyao	33/34 (1988)	364
Wang, Xun, Investigation of atomic and electronic structures of InP polar		
surfaces	33/34 (1988)	88
Wasa, K., see Kamada	33/34 (1988)	1094
Watada, A., see Ohmi	33/34 (1988)	646
Watamori, M., T. Nakahara, K. Oura, F. Shoji and T. Hanawa, Structural change of Si(100) and (111) surfaces after Ag deposition studied by MeV		
ion channeling	33/34 (1988)	51
Watamori, M., see Shoji	33/34 (1988)	
Watanabe, I., see Yamamoto	33/34 (1988)	
Weber, E.R., see Spicer	33/34 (1988)	
Weichman, F.L., see Takeuchi	33/34 (1988)	
Willemsen, M.F.C., see Kuiper	33/34 (1988)	
Xu Minsheng and Pang Shijing, A new, general adsorption theory at low		
coverages	33/34 (1988)	315
Yaguchi, H., S. Baba and A. Kinbara, RHEED study of superstructures of		
submonolayer lead films on silicon (111) surfaces	33/34 (1988)	75
	, , ,	

Yaji, T., T. Katsube, M. Hara and Y. Nakagawa, Electrically controllable		
optical attenuator with high deposition rate IrO, film	33/34 (1988)	1244
Yaji, T., see Katsube	33/34 (1988)	
Yamada, I., see Urban III	33/34 (1988)	
Yamada, S., see Kitao	33/34 (1988)	
Yamada, T., see Yoshida	33/34 (1988)	
Yamada, Y. and K. Yoshida, Growth and structure of titanium evaporated	, , , , , , , , ,	
films	33/34 (1988)	465
Yamada, Y., M. Oshima, S. Maeyama, T. Kawamura and T. Miyahara,	, , , , , ,	
Determination of Ca-As bonding at the CaF <sub>2</sub> /GaAs interface	33/34 (1988)	1073
Yamaguchi, H., M. Kawashima and Y. Horikoshi, Migration-enhanced epi-		
taxy	33/34 (1988)	406
Yamaguchi, T. and K. Harada, Lattice vibrations and thermal diffuse		
scattering in low-energy-electron-diffraction of the Si(111)2 × 1 structure	33/34 (1988)	31
Yamaguchi, T., T. Kitajima, M. Sakai and VV. Truong, Optical anisotropy		
in well-defined cermets by spectroscopic ellipsometry	33/34 (1988)	952
Yamaguchi, T., see Girouard	33/34 (1988)	959
Yamamoto, S., see Osawa	33/34 (1988)	890
Yamamoto, S., S. Sasaki, S. Taguchi, I. Watanabe and N. Koganezawa,		
Application of an impregnated cathode coated with W-Sc <sub>2</sub> O <sub>3</sub> to a high		
current density electron gun	33/34 (1988)	1200
Yamamoto, T., see Murakami	33/34 (1988)	742
Yamauchi, S. and T. Hariu, Photoelectronic properties of ZnSe films grown		
by plasma-assisted epitaxy in mixed plasma gas H <sub>2</sub> + N <sub>2</sub>	33/34 (1988)	862
Yamazaki, M., see Ohagi	33/34 (1988)	719
Yamazaki, S., see Inushima	33/34 (1988)	420
Yamazoe, N., see Miura	33/34 (1988)	1253
Yase, K., see Inaoka	33/34 (1988)	1293
Yasuda, H., see Sawabe	33/34 (1988)	539
Yasuda, Y., S. Zaima, M. Matsumoto, K. Pak and H. Yonezu, Tunneling		
injection damage in Si-SiO2 structures and its correlation with oxidation		
conditions	33/34 (1988)	1066
Yasue, T., A. Ichimiya and S. Ohtani, Electron stimulated desorption ion		
angular distribution (ESDIAD) from LiF surface	33/34 (1988)	167
Yasuoka, Y., see Inoue	33/34 (1988)	632
Yazawa, K., see Morisaki	33/34 (1988)	818
Yokotsuka, T., see Uchida	33/34 (1988)	1037
Yokoyama, H., see Chayahara	33/34 (1988)	561
Yonezu, H., see Yasuda	33/34 (1988)	1066
Yoshida, A., see Kishi	33/34 (1988)	525
Yoshida, A., see Utsunomiya	33/34 (1988)	1222
Yoshida, K., see Yamada	33/34 (1988)	465
Yoshida, K. and T. Yamada, Long-period crystal lattices in thin Bi-Mn alloy	22 (24 (1000)	516
films prepared by successive and simultaneous vacuum depositions	33/34 (1988)	
Yoshida, T., see Nishiyama	33/34 (1988)	
Yoshikawa, H., see Sugai	33/34 (1988)	
Yoshioka, K., see Nishiyama	33/34 (1988)	
Yoshitake, M., see Suzuki	33/34 (1988)	
Yotsuya, T., see Suzuki	33/34 (1988)	
Youn, K., see Sella	33/34 (1988)	
Yurimoto, H., see Kamo	33/34 (1988)	333

Zaima, S., see Yasuda	33/34 (1988) 1066
Zhang, D.H., see Haneman	33/34 (1988) 692
Zinke-Allmang, M. and L.C. Feldman, A novel technique to determine	
hetero-surface diffusion in semiconductor systems	33/34 (1988) 395

# SUBJECT INDEX

Activated carbon fibres		
K. Kaneko, T. Ohta, S. Ozeki, N. Kosugi and H. Kuroda, Chemisorption-assisted micropore filling of NO on Cu, Ni, and Co oxide-dispersed activated carbon fibers		355
Adsorption, see also Chemisorption		
S. Kohmoto and A. Ichimiya, Adsorption and desorption of Ag on the Si(111) surface	33/34 (1988)	45
M. Sakurai, T. Okano and Y. Tuzi, Ortho-para conversion of n-H <sub>2</sub> physisorbed on Ag(111) near two-dimensional condensation conditions Y.Gotoh, R.W. Vook and L. Moralez de la Garza, Characterization of	33/34 (1988)	245
Pd(111) films grown on mica and adsorption of oxygen and carbon monoxide on the films  S. Sugai, H. Yoshikawa, H. Miki, T. Kioka and K. Kawasaki, States of NO	33/34 (1988)	261
adsorbed on W(100), (110) and (111) studied by electron stimulated desorption  Xu Minsheng and Pang Shijing, A new, general adsorption theory at low	33/34 (1988)	301
coverages K. Kaneko, T. Ohta, S. Ozeki, N. Kosugi and H. Kuroda, Chemisorption-as-	33/34 (1988)	315
sisted micropore filling of NO on Cu, Ni, and Co oxide-dispersed activated carbon fibers  S. Nagashima and I. Ogura, The structure of overlayers of Se on Cu(111)	33/34 (1988)	355
surfaces	33/34 (1988)	450
Alkali metals		
S. Mizuno and A. Ichimiya, RHEED study of alkali metals on Si(111) surface	33/34 (1988)	38
Alloys		
Y. Asahara, H. Tokutaka, K. Nishimori, N. Ishihara, N. Makino, J. Le Héricy and J.P. Langeron, Surface composition analysis of Au-Cu alloy	22 /24 /1000	107
by micro-Auger electron spectroscopy <ol> <li>Katayama, F. Shoji, K. Oura and T. Hanawa, An ISS/AES study of surface segregation of Cu-Mn and Cu-Ag alloy films in-situ deposited</li> </ol>	33/34 (1988)	
onto low temperature W substrates K. Yoshida and T. Yamada, Long-period crystal lattices in thin Bi-Mn alloy	33/34 (1988)	
films prepared by successive and simultaneous vacuum depositions	33/34 (1988)	216

Y. Hayashi, K. Hyodo and H. Hagi, Corrosion of Co-Ni and Co-Cr sputtered films in high humidity atmospheres

M. Suzuki, T. Hayashi, M. Oshima, M. Wada and J. Nakano, Photoemission study of Schottky barriers formed on PbIn alloys by plasma oxidation

C.S. Fang, W.S. Tse and C. Maloney, Re/Ir/W and Os/Ir/W alloy coatings on impregnated tungsten cathodes

K. Nishimori, K. Kajio, H. Tokutaka, Y. Noishiki and N. Ishihara, Preparation of magnetron-sputtered Ag-Zn alloy films for an erasable optical-disk

33/34 (1988) 1001

# Amorphous materials

R. Konishi, Y. Kobayashi and H. Sasakura, Surface structure analysis of 33/34 (1988) 173 titanium and amorphous TiFe by SEELFS and EAPFS D. Haneman and D.H. Zhang, Special conductivity effects in amorphous hydrogenated silicon 33/34 (1988) 692 Y. Hamakawa, Current status of a-Si technology and its applications to 33/34 (1988) 705 optoelectronic devices H. Ohagi, M. Yamazaki, J. Nakata, S. Imao, J. Shirafuji, K. Fujibayashi and Y. Inuishi. Staebler-Wronski effect in a-Si:H films with different mor-33/34 (1988) 719 phology Y. Gekka, M. Akimoto, T. Kita, Y. Ohtani and H. Kezuka, The effect of oxygen on film deposition of a-Si:H by tetrode RF sputtering 33/34 (1988) 728 S. Muramatsu, S. Kokunai, Y. Nishino, H. Kajiyama, S. Matsubara, H. Itoh, N. Nakamura and T. Shimada, Photoelectric and structural properties of 33/34 (1988) 735 a-Si<sub>1-x</sub>Ge<sub>x</sub>:H alloys prepared using Si<sub>2</sub>H<sub>6</sub> and GeH<sub>4</sub> S.G. Meikle, Y. Hatanaka, Y. Suzuki and G. Shimaoka, Energy band 33/34 (1988) 750 discontinuities in the a-SiN,/c-Si heterojunction M. Tada, H. Ohsaki, Formation mechanism of evaporated a-SiO<sub>2</sub>: an approach from the oxidation processes of a-Si 33/34 (1988) 773 T. Nakamura, Y. Suzuki, N. Saito, Y. Nakanishi and G. Shimaoka, Electron spin resonance observations of Ar+-irradiated a-Si<sub>1-x</sub>C<sub>x</sub>:H films 33/34 (1988) 779 G. Shimaoka, Y. Suzuki and Y. Hatanaka, XPS study of a-Si, O,: H and a-Si, N,:H thin films 33/34 (1988) 784 Y. Hatanaka, S. Kawai, Y. Suzuki, Y. Asai and G. Shimaoka, Silicon 33/34 (1988) 792 nitride/amorphous silicon interfaces in an MIS junction Y. Shigesato, A. Murayama, T. Kamimori and K. Matsuhiro, Characterization of evaporated amorphous WO3 films by Raman and FTIR spec-33/34 (1988) 804 K. Ito and T. Nakazawa, Atom-beam sputtered indium-tin oxide films 33/34 (1988) 913

#### Antimony

M. Hashimoto and M. Matui, Effect of thin metal sublayers on the stability of the amorphous phase of antimony layers 33/34 (1988) 826

#### Atom probe mass spectroscopy

T.T. Tsong, Atomic structure and compositional analysis of solid surfaces using pulsed-laser ToF atom-probe and field ion microscopy 33/34 (1988) 15

33/34 (1988) 107

#### Atomic structure

T.T. Tsong, Atomic structure and compositional analysis of solid surfaces using pulsed-laser ToF atom-probe and field ion microscopy 33/34 (1988) 15

#### Auger electron spectroscopy

- Z.-J. Ding, R. Shimizu, T. Sekina and Y. Sakai, Theoretical and experimental studies of N(E) spectra in Auger electron spectroscopy 33/34 (1988) 99
- Y. Asahara, H. Tokutaka, K. Nishimori, N. Ishihara, N. Makino, J. Le Héricy and J.P. Langeron, Surface composition analysis of Au-Cu alloy by micro-Auger electron spectroscopy
- S. Takaki, K. Matsumoto and K. Suzuki, Properties of highly conducting ITO films prepared by ion plating 33/34 (1988) 919

# Azobenzene

Y. Nakayama, T. Takahagi, F. Soeda, A. Ishitani, M. Shimomura, K. Okuyama and T. Kunitake, XPS study of oriented organic molecules. The single crystal of an arobenzene-containing alkyl ammonium amphiphile 33/34 (1988) 1307

# Band gaps

L. Gupta, A. Mansingh and P.K. Srivastava, Band-gap narrowing in tin-doped indium oxide films 33/34 (1988) 898

### Batteries

M. Balkanski, Thin film technology for solid-state batteries 33/34 (1988) 1260

#### Benzene

H. Ohtani, B.E. Bent, C.M. Mate, M.A. Van Hove and G.A. Somorjai, Structure determination with HREELS and LEED: the molecular structure of chemisorbed benzene on Pd(111) 33/34 (1988) 254

# Borate glasses

M. Balkanski, Thin film technology for solid-state batteries 33/34 (1988) 1260

#### Boron nitride

A. Chayahara, H. Yokoyama, T. Imura, Y. Osaka and M. Fujisawa, Properties of BN thin films deposited by plasma CVD 33/34 (1988) 561

#### Cadmium sulphide

H. Fujiyasu, T. Sasaya, M. Katayama, K. Ishino, A. Ishida, H. Kuwabara, Y. Nakanishi and G. Shimaoka, Properties of CdS–ZnS superlattices prepared by hot wall epitaxy
33/34 (1988) 854

M. Iwami, M. Hirai and M. Kusaka, Existence of an alloy formation reaction in the noble metal (thin film)-CdS (cleaved surface) contact system at 33/34 (1988) 1120 room temperature Calcium fluoride Y. Yamada, M. Oshima, S. Maeyama, T. Kawamura and T. Miyahara, 33/34 (1988) 1073 Determination of Ca-As bonding at the CaF2/GaAs interface Carbon monoxide H. Ohtani, B.E. Bent, C.M. Mate, M.A. Van Hove and G.A. Somorjai, Structure determination with HREELS and LEED: the molecular struc-33/34 (1988) 254 ture of chemisorbed benzene on Pd(111) Y. Gotoh, R.W. Vook and L. Moralez de la Garza, Characterization of Pd(111) films grown on mica and adsorption of oxygen and carbon 33/34 (1988) 261 monoxide on the films Cathodes M. Niigaki, T. Nagai, M. Ota, T. Nihashi and K. Oba, MOCVD growth of 33/34 (1988) 1160 GaAs, AlGaAs and its application to transmission photocathodes S. Yamamoto, S. Sasaki, S. Taguchi, I. Watanabe and N. Koganezawa, Application of an impregnated cathode coated with W-Sc<sub>2</sub>O<sub>3</sub> to a high 33/34 (1988) 1200 current density electron gun Ceramics M. Motoyama, K. Ishima, M. Kashihara and S. Koshiba, Formation and structure of ceramic thin films deposited by ion beam sputtering 33/34 (1988) 567 Cermets C. Sella and J. Lafait, Adjustable selective profiles using cermet absorbing 33/34 (1988) 942 T. Yamaguchi, T. Kitajima, M. Sakai and V.-V. Truong, Optical anisotropy in well-defined cermets by spectroscopic ellipsometry 33/34 (1988) 952 Cesium M. Miyao, T. Wada, T. Nitta and M. Hagino, The state of Cs on negative electron affinity surfaces 33/34 (1988) 364 Channel electron multipliers Jiang Ji-bing, An experimental study of thin film layers in channel electron 33/34 (1988) 1183 multipliers Charge-discharge dynamics

L. He, H. Hasegawa, J. Luo and H. Ohno, Charge-discharge dynamics of disorder induced gap state continuum at compound semiconductor-insu-

33/34 (1988) 1030

lator interfaces

# Chemical vapour deposition

- H. Kaneko, M. Kamada, R. Kuwae, A. Sawabe and T. Inuzuka, Influence of substrate- and atmospheric-temperatures on diamond deposition 33/34 (1988) 546
- J.-R. Chen, Y.-K. Fang and S.-L. Hsu, Investigations of the growth of tungsten and tungsten silicides on SiO<sub>2</sub> substrates by low pressure CVD method

  33/34 (1988) 578
- A.E.T. Kuiper, M.F.C. Willemsen, J.M.G. Bax and F.H.P.H. Habraken,
  Oxidation behaviour of LPCVD silicon oxynitride films 33/34 (1988) 757
- J.B. Oude Elferink, F.H.P.M. Habraken, W.F. van der Weg and A.E.T.

  Kuiper, Hydrogen in oxidized silicon oxynitride thin films

  33/34 (1988) 765

# Chemisorption, see also Adsorption

- K. Hermann and P.S. Bagus, Size dependence of chemisorptive properties based on surface cluster models: CO/Cu(100) and CO/Al(100) 33/34 (1988) 252
- C. Satoko, S. Ohnishi and Tian Zeng-ju, Chemisorption and silicide formation processes of transition metals Ti, V, Cr, Fe, and Ni on Si(111) surfaces 33/34 (1988) 277
- H. Miki, H. Nagase, T. Nagase, T. Kioka, S. Sugai and K. Kawasaki, Chemisorption of NO on polycrystalline Pd surface studied by TDS, AES, UPS and XPS 33/34 (1988) 292

# Clean surfaces

- K. Okada, M. Uemura and A. Okitsu, Clean surfaces of metals prepared by scribing with a diamond tip 33/34 (1988) 112
- H. Namba, M. Masuda and H. Kuroda, Electronic states of 2×1 reconstructed surfaces of diamond(111) studied by UPS and EELS 33/34 (1988) 187

# Cleaning

S. Saito, T. Maeda, T. Soumura and K. Takeda, Temperature variation of the work function of sputter cleaned polycrystalline cobalt 33/34 (1988) 1088

# Cleaved surfaces

V.A. Grazhulis, A.M. Ionov and V.F. Kuleshov, Experimental investigation of the structure of clean cleaved surfaces of magnetic semiconductors EuX(100) 33/34 (1988) 81

#### Clusters

O. Cordes and M. Harsdorff, Investigation of gold clusters with photoelectron spectroscopy 33/34 (1988) 152

#### Coadsorption

H. Ohtani, B.E. Bent, C.M. Mate, M.A. Van Hove and G.A. Somorjai, Structure determination with HREELS and LEED: the molecular structure of chemisorbed benzene on Pd(111)

33/34 (1988) 254

# Coatings

C.S. Fang, W.S. Tse and C. Maloney, Re/Ir/W and Os/Ir/W alloy coatings on impregnated tungsten cathodes

33/34 (1988) 1189

#### Cobalt

S. Saito, T. Maeda, T. Soumura and K. Takeda, Temperature variation of the work function of sputter cleaned polycrystalline cobalt

33/34 (1988) 1088

# Composite films

N. Tanaka and K. Mihama, High resolution electron microscopy and microdiffraction of metal–MgO composite films

33/34 (1988) 472

# Conduction

D. Haneman and D.H. Zhang, Special conductivity effects in amorphous hydrogenated silicon

33/34 (1988) 692

# Copper

 Alstrup and P.J. Møller, X-ray photoelectron spectroscopy study of the vapor deposition of copper onto a MgO(100) surface

33/34 (1988) 143

R.W. Vook, T.J. Swirbel and S.S. Chao, Work function changes in the (111)Pd/(111)Cu and CO/(111)Pd/(111)Cu systems

33/34 (1988) 220

S. Nagashima and I. Ogura, The structure of overlayers of Se on Cu(111)

33/34 (1988) 450

K. Ishii, S. Handa and H. Terauchi, Sputtering of Cu in a high pressure atmosphere

33/34 (1988) 1107

#### Corrosion

J.-R. Chen, S.-D. Chyou, S.-I. Lew, C.-J. Huang, C.-S. Fang and W.-S. Tse, Investigations of the biological corrosion of condenser tubes by scanning Auger microprobe techniques

33/34 (1988) 212

Y. Hayashi, K. Hyodo and H. Hagi, Corrosion of Co-Ni and Co-Cr sputtered films in high humidity atmospheres

33/34 (1988) 1001

# Crystal growth

K. Matsumoto, T. Hayashi, M. Honjo and G. Shimaoka, The role of water vapor adsorbed on the surface in the growth of ZnO crystal

M. Kumagawa, T. Ozawa and Y. Hayakawa, A new technique for the growth of III-V mixed crystal layers 33/34 (1988) 611 Crystal structure H. Miyatake, T. Nishioka, H. Ito, H. Koyama, S. Kawazu and M. Nomura, EXAFS study on tungsten silicide films 33/34 (1988) 160 Crystallization C. Kaito, T. Doi, Y. Saito, K. Tanaka and K. Fujita, Studies on the structure and the crystallization process of ion sputtered TiSe, films 33/34 (1988) 509 Defects F. Shoji, T. Kuroi, M. Watamori, K. Oura and T. Hanawa, Capture of Ag atoms in defects produced by low-energy Ar+ ion bombardment on the Si(111) surface 33/34 (1988) W.E. Spicer, T. Kendelewicz, N. Newman, R. Cao, C. McCants, K. Miyano, I. Lindau, Z. Lilienthal-Weber and E.R. Weber, The advanced unified defect model and its applications 33/34 (1988) 1009 Depth profiling M. Seo, K. Takemasa and N. Sato, Depth-profiling of metal oxide films prepared with MOCVD 33/34 (1988) 120 H. Saijo, An electron energy-loss spectroscopy for depth analysis of a very shallow surface layer 33/34 (1988) 199 Desorption S. Kohmoto and A. Ichimiya, Adsorption and desorption of Ag on the Si(111) surface 33/34 (1988) Y. Ohno, T. Toya, S. Ishi and K. Nagai, Theory of angular and speed distributions of desorbed hydrogen from metal surfaces 33/34 (1988) 238 S. Sugai, H. Yoshikawa, H. Miki, T. Kioka and K. Kawasaki, States of NO adsorbed on W(100), (110) and (111) studied by electron stimulated desorption 33/34 (1988) 301 K. Suzuki, S. Kobayashi and T. Katsube, Cross sections of electron stimulated desorption under technical vacuum conditions and 1 to 3 keV electron energies 33/34 (1988) 325 Diamond H. Namba, M. Masuda and H. Kuroda, Electronic states of 2 × 1 reconstructed surfaces of diamond(111) studied by UPS and EELS 33/34 (1988) 187 A. Sawabe, H. Yasuda, T. Inuzuka and K. Suzuki, Growth of diamond thin films in a DC discharge plasma 33/34 (1988) 539 H. Kaneko, M. Kamada, R. Kuwae, A. Sawabe and T. Inuzuka, Influence of 33/34 (1988) 546 substrate- and atmospheric-temperatures on diamond deposition

Electroluminescence

M. Kamo, H. Yurimoto and Y. Sato, Epitaxial growth of diamond on 33/34 (1988) 553 diamond substrate by plasma assisted CVD Dielectric constant S. Nonaka and A. Kakimoto, Dielectric property measurements of thin film 33/34 (1988) 980 specimens Dissociation T. Arakawa, N. Suezawa, G. Adachi and J. Shiokawa, Dissociation of CO2 on some rare earth metal thin films 33/34 (1988) 286 Doping using photolysis M. Mashita, M. Shimazu, M. Ishii and M. Tsuda, Ultraviolet light irradiation 33/34 (1988) 602 effects on silicon doping into GaAs using disilane in OMVPE ECR plasma Y. Hamakawa, Current status of a-Si technology and its applications to 33/34 (1988) 705 optoelectronic devices T. Kamada, T. Hirao, M. Kitagawa, K. Setsune, K. Wasa and T. Izumi, Annealing behavior of silicon nitride and silicon oxynitride films prepared by ECR plasma CVD method 33/34 (1988) 1094 Y. Hattori, D. Kruangam, T. Toyama, H. Okamoto and Y. Hamakawa, Highly conductive p-type microcrystalline SiC:H prepared by ECR plasma 33/34 (1988) 1276 CVD Electrochemistry H. Morisaki and K. Yazawa, Electrochemical and electrochromic aspects of 33/34 (1988) 818 porous titania glass Electrochromic absorption M. Kitao, S. Yamada, Y. Hiruta, N. Suzuki and K. Urabe, Electrochromic absorption spectra modulated by the composition of WO<sub>3</sub>/MoO<sub>3</sub> mixed 33/34 (1988) 812 films Electrochromic properties Y. Shigesato, A. Murayama, T. Kamimori and K. Matsuhiro, Characterization of evaporated amorphous WO3 films by Raman and FTIR spec-33/34 (1988) 804 troscopies

R. Fukao, H. Fujikawa and Y. Hamakawa, High-brightness low-driving-volt-

33/34 (1988) 1229

age green color thin-film electroluminescent devices

#### Electrolytes

- P. Dzwonkowski, C. Julien and M. Balkanski, Structural and electrical properties of lithio-borate solid electrolyte thin films
  - 33/34 (1988) 838
- M. Takeuchi, F.L. Weichman, K. Morosawa, M. Kawakami and H. Nagasaka, Photoelectrochemical behavior of Cu<sub>2</sub>O single crystals in liquid electrolytes
- 33/34 (1988) 972

## Electron beam evaporation

- H. Uchiike, S. Hirao, K. Ohishi and Y. Fukushima, Characterization of electron beam evaporated ZnS:Mn thin films by using particle induced X-ray emission analysis
- 33/34 (1988) 661

#### Electron emission

- S. Yamamoto, S. Sasaki, S. Taguchi, I. Watanabe and N. Koganezawa, Application of an impregnated cathode coated with W-Sc<sub>2</sub>O<sub>3</sub> to a high current density electron gun
- 33/34 (1988) 1200

# Electron energy loss spectroscopy

- H. Hirayama, S. Baba and A. Kinbara, Electron energy loss measurements of In/Si(111) superstructures: correlation of the spectra with surface superstructures.
- 33/34 (1988) 193
- H. Saijo, An electron energy-loss spectroscopy for depth analysis of a very shallow surface layer
- 33/34 (1988) 199

#### Electron spin resonance

- T. Nakamura, Y. Suzuki, N. Saito, Y. Nakanishi and G. Shimaoka, Electron spin resonance observations of Ar<sup>+</sup>-irradiated a-Si<sub>1-x</sub>C<sub>x</sub>:H films
- 33/34 (1988) 779

# Electron stimulated desorption

- T. Yasue, A. Ichimiya and S. Ohtani, Electron stimulated desorption ion angular distribution (ESDIAD) from LiF surface
- 33/34 (1988) 167

#### Ellipsometry

- F.K. Urban III, Ellipsometer measurement of thickness and optical properties of thin absorbing films
- 33/34 (1988) 934
- F.K. Urban III, L.L. Levenson, H. Hashimoto, H. Usui, I. Yamada and T. Takagi, Optical properties of reactive ICB aluminum oxide films deposited on Si(100)
- 33/34 (1988) 966

# Epitaxial orientation relationships

- Y. Gotoh, M. Uwaha and I. Arai, Interpretation of the epitaxial orientation relationship at bcc(110)/fcc(111) interfaces
- 33/34 (1988) 443

# **Epitaxy**

N. Itoh, K. Okamoto, H. Ogawa, T. Kawabata and S. Koike, Strains in ZnS<sub>x</sub>Se<sub>1-x</sub> films grown on (001)-GaAs substrates 33/34 (1988) 413 S. Nagashima and I. Ogura, The structure of overlayers of Se on Cu(111) surfaces 33/34 (1988) 450 C. Tatsuyama, H. Ueba and Y. Kataoka, Heteroepitaxy of Ge films on Si(100) surface 33/34 (1988) 457 T. Arakawa and G. Shimaoka, The epitaxial growth of ZnO thin films on cubic substrates 33/34 (1988) 501 M. Kamo, H. Yurimoto and Y. Sato, Epitaxial growth of diamond on 33/34 (1988) 553 diamond substrate by plasma assisted CVD T. Imai, S. Fuke, K. Mori and K. Kuwahara, Growth of GaAs epitaxial layers prepared in the laboratory with an integrated safety MOCVD 33/34 (1988) 587 T. Imai, S. Fuke, K. Kasai and K. Kuwahara, Iodine-doping effects on the hetero-epitaxial growth of ZnS on GaP substrate using VPE method 33/34 (1988) 654 Y. Nakanishi, K. Kimura, G. Shimaoka and M. Ogita, Epitaxial growth of ZnS:Mn/Y2O3/ZnS/Si(100) multilayer thin films 33/34 (1988) 677 K. Inaoka, K. Yase and M. Okada, Epitaxial growth of linear-chain mole-33/34 (1988) 1293 cules prepared by physical-vapour-deposition Ferrite films F. Ohmi, A. Watada, I. Miyamoto and Y. Kaneko, The preparation of Co-Ti substituted Ba-ferrite films 33/34 (1988) 646 Field emission microscopy M. Sato, FEM study of surface diffusion of the O2-W adsorption system 33/34 (1988) 348 Field ion microscopy T.T. Tsong, Atomic structure and compositional analysis of solid surfaces 33/34 (1988) 15 using pulsed-laser ToF atom-probe and field ion microscopy Film growth T. Ota and T. Itagaki, Relationships between the initial growth of a Ga film 33/34 (1988) 484 and the surface structure of cleaved (100)NaCl R. Conrad and M. Harsdorff, Nucleation and growth of silicon on NaCl 33/34 (1988) 492 (100) cleavage planes by RF sputtering K. Mihama, N. Tanaka and Y. Saito, Growth of Al-Mn quasi-crystals by vacuum deposition 33/34 (1988) 531

F. Ohmi, A. Watada, I. Miyamoto and Y. Kaneko, The preparation of

Y. Gekka, M. Akimoto, T. Kita, Y. Ohtani and H. Kezuka, The effect of oxygen on film deposition of a-Si:H by tetrode RF sputtering

M. Fukui and K. Oda, Studies on metal film growth through instantaneously

33/34 (1988) 646

33/34 (1988) 728

33/34 (1988) 882

Co-Ti substituted Ba-ferrite films

observed attenuated total reflection spectra

# Fine particles

M. Komiyama, J. Kobayashi, Y. Ishigama, S. Morita and N. Mikoshiba, Scanning tunnelling microscopy images of noble metal fine particles supported on thin titanium oxide film

33/34 (1988) 206

# Flash evaporation

R.D.L. Kristensen, S.N. Sahu and D. Haneman, Thin films of CuInSe<sub>2</sub> for photoelectrochemical cells by flash evaporation
33

33/34 (1988) 1285

# Fourier transform infrared spectroscopy

Y. Shigesato, A. Murayama, T. Kamimori and K. Matsuhiro, Characterization of evaporated amorphous WO<sub>3</sub> films by Raman and FTIR spectroscopies

33/34 (1988) 804

#### Gallium

T. Ota and T. Itagaki, Relationships between the initial growth of a Ga film and the surface structure of cleaved (100)NaCl

33/34 (1988) 484

#### Gallium aluminium arsenide

C.S. Fang, W.S. Tse, C.P. Chang, K.F. Pai and J.-R. Chen, Hydrodynamical theory of the LO-phonon-plasmon dispersion in Al. Ga<sub>1-x</sub>. As

33/34 (1988) 988

#### Gallium arsenide

C. Tatsuyama, H. Ueba and T. Kondo, Low-energy-electron-loss spectroscopy of thin Ge layers on a GaAs(100) surface

33/34 (1988) 180

T. Imai, S. Fuke, K. Mori and K. Kuwahara, Growth of GaAs epitaxial layers prepared in the laboratory with an integrated safety MOCVD system

33/34 (1988) 587

M. Niigaki, T. Nagai, M. Ota, T. Nihashi and K. Oba, MOCVD growth of GaAs, AlGaAs and its application to transmission photocathodes

33/34 (1988) 1160

# Gallium arsenide phosphide

T. Sukegawa, S. Takeuchi, S. Hasegawa, H. Ueno and A. Tanaka, Measurement of optical-absorption coefficient and minority carrier diffusion length in GaAs<sub>1-x</sub>P<sub>x</sub> Schottky-barrier photodiodes

33/34 (1988) 1044

#### Germanium

 V.A. Grazhulis, New results in low temperature studies of semiconductor surfaces

33/34 (1988) 1

C. Tatsuyama, H. Ueba and T. Kondo, Low-energy-electron-loss spectroscopy of thin Ge layers on a GaAs(100) surface

fier

C. Tatsuyama, H. Ueba and Y. Kataoka, Heteroepitaxy of Ge films on 33/34 (1988) 457 Si(100) surface N. Inoue and Y. Yasuoka, Comparison of the properties of Ge thin films grown by plasma-assisted deposition with conventional vacuum evapora-33/34 (1988) 632 Gold O. Cordes and M. Harsdorff, Investigation of gold clusters with photoelec-33/34 (1988) 152 tron spectroscopy Granular copper systems F.E. Girouard, V.-V. Truong and T. Yamaguchi, Optical properties of 33/34 (1988) 959 granular copper systems Growth mechanism T. Inushima, N. Hirose, K. Urata, T. Sato and S. Yamazaki, Film growth mechanism of photo-chemical vapor deposition 33/34 (1988) 420 T. Nomura, M. Miyao, K. Ishikawa, Y. Suzuki and M. Hagino, Accommodations and initial growth stages of GaAs/GaP and GaP/GaAs by MBE 33/34 (1988) 1176 Y. Saito, K. Inaoka, C. Kaito and M. Okada, Molecular energetics of the growth mechanism of stearic acid thin films prepared by vacuum-deposi-33/34 (1988) 1298 Heterostructures M. Zinke-Allmang and L.C. Feldman, A novel technique to determine hetero-surface diffusion in semiconductor systems 33/34 (1988) 395 S.G. Meikle, Y. Hatanaka, Y. Suzuki and G. Shimaoka, Energy band 33/34 (1988) 750 discontinuities in the a-SiN, /c-Si heterojunction Hot wall epitaxy H. Fujiyasu, T. Sasaya, M. Katayama, K. Ishino, A. Ishida, H. Kuwabara, Y. Nakanishi and G. Shimaoka, Properties of CdS-ZnS superlattices prepared by hot wall epitaxy 33/34 (1988) 854 A. Ishida, Y. Sase and H. Fujiyasu, Optical properties of PbTe/Pb<sub>1-x</sub>Eu<sub>x</sub>Te superlattices prepared by hot wall epitaxy 33/34 (1988) 868 Hydrogen Y. Ohno, T. Toya, S. Ishi and K. Nagai, Theory of angular and speed distributions of desorbed hydrogen from metal surfaces 33/34 (1988) . 238 M. Sakurai, T. Okano and Y. Tuzi, Ortho-para conversion of n-H2 physisorbed on Ag(111) near two-dimensional condensation conditions 33/34 (1988) 245 Immuno-sensor

T. Katsube, T. Yaji, K. Suzuki, S. Kobayashi, T. Kawaguchi and T. Shiro, LB film immobilized immunosensor with a charge detection type ampli-

#### Indium

H. Hirayama, S. Baba and A. Kinbara, Electron energy loss measurements of In/Si(111) superstructures: correlation of the spectra with surface super-structures

33/34 (1988) 193

# Indium gallium arsenide phosphide

S. Fujii, M. Tobita, S. Furuta, S. Sakai and M. Umeno, Low temperature LPE growth and photoluminescence of InGaAsP on GaAsP 33/34 (1988) 1151

# Indium oxide

M. Takeuchi, K. Inoue, S. Ozawa and H. Nagasaka, Photoconductive properties of ultrafine indium oxide particle layers 33/34 (1988) 905

# Indium phosphide

Xun Wang, Investigation of atomic and electronic structures of InP polar surfaces 33/34 (1988) 88

#### Indium selenide

J.Y. Emery, C. Julien, M. Jouanne and M. Balkanski, Growth conditions and structure of polycrystalline InSe thin films 33/34 (1988) 619

#### Indium-tin oxide

- L. Gupta, A. Mansingh and P.K. Srivastava, Band-gap narrowing in tin-doped indium oxide films

  33/34 (1988) 898

  K. Ito and T. Nakazawa, Atom-beam sputtered indium-tin oxide films 33/34 (1988) 913
- S. Takaki, K. Matsumoto and K. Suzuki, Properties of highly conducting

  ITO films prepared by ion plating

  33/34 (1988) 919

# Infrared spectroscopy

Y. Suzuki, M. Osawa, A. Hatta and W. Suĕtaka, Mechanism of absorption enhancement in infrared ATR spectra observed in the Kretschmann configuration 33/34 (1988) 875

#### Interdiffusion

C. Tatsuyama, H. Ueba and T. Kondo, Low-energy-electron-loss spectroscopy of thin Ge layers on a GaAs(100) surface 33/34 (1988) 180

# Interfaces

L. He, H. Hasegawa, J. Luo and H. Ohno, Charge-discharge dynamics of disorder induced gap state continuum at compound semiconductor-insulator interfaces 33/34 (1988) 1030 M. Iwami, M. Hirai and M. Kusaka, Existence of an alloy formation reaction in the noble metal (thin film)-CdS (cleaved surface) contact system at room temperature

33/34 (1988) 1120

# Ion assisted deposition

F.K. Urban III, L.L. Levenson, H. Hashimoto, H. Usui, I. Yamada and T. Takagi, Optical properties of reactive ICB aluminum oxide films deposited on Si(100)

33/34 (1988) 966

#### Ion beam sputtering

M. Motoyama, K. Ishima, M. Kashihara and S. Koshiba, Formation and structure of ceramic thin films deposited by ion beam sputtering

33/34 (1988) 567

#### Ion channeling

M. Watamori, T. Nakahara, K. Oura, F. Shoji and T. Hanawa, Structural change of Si(100) and (111) surfaces after Ag deposition studied by MeV ion channeling

33/34 (1988) 51

# Ion etching

H. Kinoshita, Low-energy ion etching and oxidation of Si in O2 magnetron plasma

33/34 (1988) 1101

# Ion plating

S. Takaki, K. Matsumoto and K. Suzuki, Properties of highly conducting ITO films prepared by ion plating

33/34 (1988) 919

# Ion scattering spectroscopy

M. Inoue, Y. Sugiyama, S. Nishigaki and T. Noda, Sequential SIMS-ISS measurements using a double focusing mass spectrometer

33/34 (1988) 138

#### Iridium oxide

T. Yaji, T. Katsube, M. Hara and Y. Nakagawa, Electrically controllable optical attenuator with high deposition rate IrOx film

33/34 (1988) 1244

#### Iron

T. Urano and T. Kanaji, Structures of iron films deposited on Si(111)7 × 7 surface studied by LEED

33/34 (1988) 68

#### Kinetics of desorption

K. Nagai and A. Hirashima, Zero-order desorption kinetics observed in phase coexistence regions in adsorbates

# Kinetics of growth

- J.L. Robins, Thin film nucleation and growth kinetics 33/34 (1988) 379
- Y. Yamada, M. Oshima, S. Maeyama, T. Kawamura and T. Miyahara, Determination of Ca-As bonding at the CaF<sub>2</sub>/GaAs interface 33/34 (1988) 1073

# Langmuir-Blodgett films

- Y. Ozaki, K. Iriyama, T. Iwasaki and H. Hamaguchi, Resonance Raman study of mono- and multilayer Langmuir-Blodgett films of merocyanine J-aggregates 33/34 (1988) 1317
- T. Katsube, T. Yaji, K. Suzuki, S. Kobayashi, T. Kawaguchi and T. Shiro, LB film immobilized immunosensor with a charge detection type amplifier 33/34 (1988) 1332

#### Lanthanum hexaboride

Y. Uchida, T. Yokotsuka, T. Narusawa and H. Nakashima, Formation and characteristics of LaB<sub>6</sub>/GaAs(001) Schottky barrier 33/34 (1988) 1037

# Lanthanum trifluoride

N. Miura, J. Hisamoto, N. Yamazoe, LaF<sub>3</sub> sputtered film sensor for detecting oxygen at room temperature 33/34 (1988) 1253

#### Lateral epitaxial growth

M. Oshima, Y. Kobayashi, T. Kawamura, S. Maeyama, Y. Shinoda and T. Miyahara, Synchrotron radiation photoemission spectroscopy of Ga-in-sulator interfaces for GaAs lateral epitaxial growth 33/34 (1988) 1168

#### Lattice vibration

T. Yamaguchi and K. Harada, Lattice vibrations and thermal diffuse scattering in low-energy-electron-diffraction of the Si(111)2×1 structure 33/34 (1988) 31

#### Lead

H. Yaguchi, S. Baba and A. Kinbara, RHEED study of superstructures of submonolayer lead films on silicon (111) surfaces 33/34 (1988) 75

#### Lead telluride

A. Ishida, Y. Sase and H. Fujiyasu, Optical properties of PbTe/Pb<sub>1-x</sub>Eu<sub>x</sub>Te superlattices prepared by hot wall epitaxy 33/34 (1988) 868

#### Lead titanium oxide

M. Okuyama, Y. Togami and Y. Hamakawa, Microwave effect in RF magnetron sputtering of PbTiO<sub>3</sub> 33/34 (1988) 625

# Light emitting diodes

Y. Hamakawa, D. Kruangam, M. Deguchi, Y. Hattori, T. Toyama and H. Okamoto, Visible light thin film LED made of a-SiC p-i-n junction 33/34 (1988) 1142

# Linear-chain molecules

K. Inaoka, K. Yase and M. Okada, Epitaxial growth of linear-chain molecules prepared by physical-vapour-deposition 33/34 (1988) 1293

# Liquid phase epitaxy

S. Fujii, M. Tobita, S. Furuta, S. Sakai and M. Umeno, Low temperature LPE growth and photoluminescence of InGaAsP on GaAsP 33/34 (1988) 1151

# Lithium fluoride

T. Yasue, A. Ichimiya and S. Ohtani, Electron stimulated desorption ion angular distribution (ESDIAD) from LiF surface 33/34 (1988) 167

# Low energy electron diffraction

- T. Yamaguchi and K. Harada, Lattice vibrations and thermal diffuse scattering in low-energy-electron-diffraction of the Si(111)2 × 1 structure 33/34 (1988) 3
- V.A. Grazhulis, A.M. Ionov and V.F. Kuleshov, Experimental investigation of the structure of clean cleaved surfaces of magnetic semiconductors EuX(100) 33/34 (1988)
- H. Ohtani, B.E. Bent, C.M. Mate, M.A. Van Hove and G.A. Somorjai, Structure determination with HREELS and LEED: the molecular structure of chemisorbed benzene on Pd(111) 33/34 (1988) 254

# Magnetic semiconductors

V.A. Grazhulis, A.M. Ionov and V.F. Kuleshov, Experimental investigation of the structure of clean cleaved surfaces of magnetic semiconductors EuX(100) 33/34 (1988) 81

# Metal oxide films

M. Seo, K. Takemasa and N. Sato, Depth-profiling of metal oxide films prepared with MOCVD 33/34 (1988) 120

# Metalorganic chemical vapour deposition

- M. Seo, K. Takemasa and N. Sato, Depth-profiling of metal oxide films prepared with MOCVD 33/34 (1988) 120
- Y. Kawakami, T. Taguchi and A. Hiraki, Interface characteristics and excitonic emissions in ZnSe–ZnSSe superlattices fabricated by low-pressure MOCVD 33/34 (1988) 1059
- M. Niigaki, T. Nagai, M. Ota, T. Nihashi and K. Oba, MOCVD growth of GaAs, AlGaAs and its application to transmission photocathodes 33/34 (1988) 1160

# Microdiffraction

N. Tanaka and K. Mihama, High resolution electron microscopy and microdiffraction of metal-MgO composite films 33/34 (1988) 472

# Migration-enhanced epitaxy

H. Yamaguchi, M. Kawashima and Y. Horikoshi, Migration-enhanced epitaxy 33/34 (1988) 406

#### MIS structure

- Y. Hatanaka, S. Kawai, Y. Suzuki, Y. Asai and G. Shimaoka, Silicon nitride/amorphous silicon interfaces in an MIS junction 33/34 (1988) 792
- Y. Yasuda, S. Zaima, M. Matsumoto, K. Pak and H. Yonezu, Tunneling injection damage in Si-SiO<sub>2</sub> structures and its correlation with oxidation conditions 33/34 (1988) 1066

# Mixed crystal layers

M. Kumagawa, T. Ozawa and Y. Hayakawa, A new technique for the growth of III-V mixed crystal layers 33/34 (1988) 611

#### Molecular beam epitaxy

- J.Y. Emery, C. Julien, M. Jouanne and M. Balkanski, Growth conditions and structure of polycrystalline InSe thin films 33/34 (1988) 619
- T. Nomura, M. Miyao, K. Ishikawa, Y. Suzuki and M. Hagino, Accommodations and initial growth stages of GaAs/GaP and GaP/GaAs by MBE 33/34 (1988) 1176

# Molybdenum oxide

M. Kitao, S. Yamada, Y. Hiruta, N. Suzuki and K. Urabe, Electrochromic absorption spectra modulated by the composition of WO<sub>3</sub>/MoO<sub>3</sub> mixed films
 33/34 (1988) 812

# Monolayer films

I. Alstrup and P.J. Møller, X-ray photoelectron spectroscopy study of the vapor deposition of copper onto a MgO(100) surface 33/34 (1988) 143

#### Monte Carlo simulation

Z.-J. Ding, R. Shimizu, T. Sekina and Y. Sakai, Theoretical and experimental studies of N(E) spectra in Auger electron spectroscopy 33/34 (1988) 99

# MOSFET (metal-oxide-semiconductor field effect transistor)

S. Suyama, A. Okamoto and T. Serikawa, High-quality gate-oxide films for MOSFET's deposited by oxygen-argon sputtering 33/34 (1988) 1236

# Multilayer films

- R.W. Vook, T.J. Swirbel and S.S. Chao, Work function changes in the (111)Pd/(111)Cu and CO/(111)Pd/(111)Cu systems 33/34 (1988) 220
- H. Nozoye, K. Kawaguchi and S. Shin, Ultra-high vacuum deposition of Ti<sub>n</sub>O<sub>2n-1</sub>-Ni multilayers. Application of a pulsed molecular beam source to synthesize designed ceramic films 33/34 (1988) 640
- Y. Nakanishi, K. Kimura, G. Shimaoka and M. Ogita, Epitaxial growth of ZnS:Mn/Y<sub>2</sub>O<sub>3</sub>/ZnS/Si(100) multilayer thin films
- F.E. Girouard, V.-V. Truong and T. Yamaguchi, Optical properties of granular copper systems
- C. Sella, K. Youn, R. Barchewitz, M. Arbaoui and R. Krishnan, Structure and properties of W/C and Ni/C multilayer films 33/34 (1988) 1208

# Negative electron affinity surfaces

M. Miyao, T. Wada, T. Nitta and M. Hagino, The state of Cs on negative electron affinity surfaces 33/34 (1988) 364

#### Nickel-titanium oxide

H. Nozoye, K. Kawaguchi and S. Shin, Ultra-high vacuum deposition of  $Ti_nO_{2n-1}$ -Ni multilayers. Application of a pulsed molecular beam source to synthesize designed ceramic films

# Niobium germanide

M. Akinaga and T. Ueno, Possible high T<sub>c</sub> superconductivity and large fluctuation effect in Nb<sub>2</sub>Ge films 33/34 (1988) 1269

### Nitridation

M. Nunogaki, H. Suezawa, K. Hayasi and K. Miyazaki, Plasma source nitriding 33/34 (1988) 1135

# Nitrogen oxide

- H. Miki, H. Nagase, T. Nagase, T. Kioka, S. Sugai and K. Kawasaki, Chemisorption of NO on polycrystalline Pd surface studied by TDS, AES, UPS and XPS
- S. Sugai, H. Yoshikawa, H. Miki, T. Kioka and K. Kawasaki, States of NO adsorbed on W(100), (110) and (111) studied by electron stimulated desorption
- K. Kaneko, T. Ohta, S. Ozeki, N. Kosugi and H. Kuroda, Chemisorption-assisted micropore filling of NO on Cu, Ni, and Co oxide-dispersed activated carbon fibers

#### Nucleation

J.L. Robins, Thin film nucleation and growth kinetics

33/34 (1988) 379

33/34 (1988) 292

33/34 (1988) 301

33/34 (1988) 355

33/34 (1988) 677

33/34 (1988) 959

### Optical attenuator

T. Yaji, T. Katsube, M. Hara and Y. Nakagawa, Electrically controllable optical attenuator with high deposition rate IrO, film 33/34 (1988) 1244

## Optical properties

- C. Sella and J. Lafait, Adjustable selective profiles using cermet absorbing films 33/34 (1988) 942
- T. Yamaguchi, T. Kitajima, M. Sakai and V.-V. Truong, Optical anisotropy in well-defined cermets by spectroscopic ellipsometry 33/34 (1988) 952
- F.K. Urban III, L.L. Levenson, H. Hashimoto, H. Usui, I. Yamada and T. Takagi, Optical properties of reactive ICB aluminum oxide films deposited on Si(100) 33/34 (1988) 966

### Organic molecules

Y. Nakayama, T. Takahagi, F. Soeda, A. Ishitani, M. Shimomura, K. Okuyama and T. Kunitake, XPS study of oriented organic molecules. The single crystal of an arobenzene-containing alkyl ammonium amphiphile 33/34 (1988) 1307

# Organometallic vapour phase epitaxy

M. Mashita, M. Shimazu, M. Ishii and M. Tsuda, Ultraviolet light irradiation effects on silicon doping into GaAs using disilane in OMVPE 33/34 (1988) 602

#### Oxidation

- M. Tada, H. Ohsaki, Formation mechanism of evaporated a-SiO<sub>2</sub>: an approach from the oxidation processes of a-Si
  33/34 (1988) 773
- Y. Yasuda, S. Zaima, M. Matsumoto, K. Pak and H. Yonezu, Tunneling injection damage in Si-SiO<sub>2</sub> structures and its correlation with oxidation conditions 33/34 (1988) 1066
- H. Kinoshita, Low-energy ion etching and oxidation of Si in O<sub>2</sub> magnetron plasma 33/34 (1988) 1101

#### Oxygen

- Y. Gotoh, R.W. Vook and L. Moralez de la Garza, Characterization of Pd(111) films grown on mica and adsorption of oxygen and carbon monoxide on the films 33/34 (1988) 261
- Y. Gekka, M. Akimoto, T. Kita, Y. Ohtani and H. Kezuka, The effect of oxygen on film deposition of a-Si:H by tetrode RF sputtering 33/34 (1988) 728

#### Oxygen detector

N. Miura, J. Hisamoto, N. Yamazoe, LaF<sub>3</sub> sputtered film sensor for detecting oxygen at room temperature 33/34 (1988) 1253

#### Palladium

- R.W. Vook, T.J. Swirbel and S.S. Chao, Work function changes in the (111)Pd/(111)Cu and CO/(111)Pd/(111)Cu systems 33/34 (1988) 220
- H. Ohtani, B.E. Bent, C.M. Mate, M.A. Van Hove and G.A. Somorjai, Structure determination with HREELS and LEED: the molecular structure of chemisorbed benzene on Pd(111)
  - 33/34 (1988) 254
- Y. Gotoh, R.W. Vook and L. Moralez de la Garza, Characterization of Pd(111) films grown on mica and adsorption of oxygen and carbon monoxide on the films
- 33/34 (1988) 261
- H. Miki, H. Nagase, T. Nagase, T. Kioka, S. Sugai and K. Kawasaki, Chemisorption of NO on polycrystalline Pd surface studied by TDS, AES, UPS and XPS
- 33/34 (1988) 292

# Particle growth

K. Kishi, A. Yoshida and K. Koike, Nucleation and stability of a spherical particle growing with a liquid layer on the surface

# 33/34(1988) 525

# Particle induced X-ray emission analysis

- H. Uchiike, S. Hirao, K. Ohishi and Y. Fukushima, Characterization of electron beam evaporated ZnS:Mn thin films by using particle induced X-ray emission analysis
- 33/34 (1988) 661

#### Phase transitions

- M. Okuda, F.S. Jiang, J.C. Rhee, H. Takenoshita and T. Matsushita, Studies on the amorphous-crystalline reversible phase transition of Te-Se-Ga thin film alloys
- 33/34 (1988) 797
- M. Hashimoto and M. Matui, Effect of thin metal sublayers on the stability of the amorphous phase of antimony layers
- 33/34 (1988) 826

# Phonon-plasmon dispersion

- C.S. Fang, W.S. Tse, C.P. Chang, K.F. Pai and J.-R. Chen, Hydrodynamical theory of the LO-phonon-plasmon dispersion in Al<sub>x</sub>Ga<sub>1-x</sub>As
  - 33/34 (1988) 988

### Photo-chemical vapour deposition

- T. Inushima, N. Hirose, K. Urata, T. Sato and S. Yamazaki, Film growth mechanism of photo-chemical vapor deposition
- 33/34 (1988) 420
- M. Okuyama, N. Fujiki, K. Inoue and Y. Hamakawa, SiO<sub>2</sub> film growth by double-excitation photo-CVD using Si<sub>3</sub>H<sub>8</sub> and O<sub>2</sub>
- 33/34 (1988) 427

#### Photoelectrochemical cells

- R.D.L. Kristensen, S.N. Sahu and D. Haneman, Thin films of CuInSe<sub>2</sub> for photoelectrochemical cells by flash evaporation
- 33/34 (1988) 1285

33/34 (1988) 1051

# Photoelectrochemistry

M. Takeuchi, F.L. Weichman, K. Morosawa, M. Kawakami and H. Nagasaka, Photoelectrochemical behavior of Cu<sub>2</sub>O single crystals in liquid electrolytes
33/34 (1988) 972

# Photoelectron spectroscopy

O. Cordes and M. Harsdorff, Investigation of gold clusters with photoelectron spectroscopy 33/34 (1988) 152

# Photo-oxidation

J. Sunada, K. Okamoto, K. Oishi and S. Shimazu, UV photo-oxidation of Te films (photon energy dependence) 33/34 (1988) 434

# Piezoelectric effect

Y. Kanda and K. Suzuki, Statistical model for piezoresistance in thin films
M. Utsunomiya and A. Yoshida, Piezoresistive effect of hydrogenated microcrystalline silicon films
33/34 (1988) 996

# Plasma

- J. Mahanty, N.H. March and B.V. Paranjape, Interaction between rare gas atoms outside metal surfaces: role of plasma excitations 33/34 (1988) 309
- A. Sawabe, H. Yasuda, T. Inuzuka and K. Suzuki, Growth of diamond thin films in a DC discharge plasma 33/34 (1988) 539
- M. Kamo, H. Yurimoto and Y. Sato, Epitaxial growth of diamond on diamond substrate by plasma assisted CVD 33/34 (1988) 553
- N. Inoue and Y. Yasuoka, Comparison of the properties of Ge thin films grown by plasma-assisted deposition with conventional vacuum evapora-
- tion 33/34 (1988) 632
  S. Muramatsu, S. Kokunai, Y. Nishino, H. Kajiyama, S. Matsubara, H. Itoh,
  N. Nakamura and T. Shimada. Photoelectric and structural properties of
- a-Si<sub>1-x</sub>Ge<sub>x</sub>:H alloys prepared using Si<sub>2</sub>H<sub>6</sub> and GeH<sub>4</sub> 33/34 (1988) 735 K. Murakami, T. Takeuchi, K. Ishikawa and T. Yamamoto, Characterization
- of silicon nitride films formed in an RF glow discharge 33/34 (1988) 742 S. Yamauchi and T. Hariu, Photoelectronic properties of ZnSe films grown
- by plasma-assisted epitaxy in mixed plasma gas  $H_2 + N_2$  33/34 (1988) 862 M. Suzuki, T. Hayashi, M. Oshima, M. Wada and J. Nakano, Photoemission
- H. Kinoshita, Low-energy ion etching and oxidation of Si in O<sub>2</sub> magnetron plasma 33/34 (1988) 1101

study of Schottky barriers formed on PbIn alloys by plasma oxidation

#### Platinum

- K. Matsuo and K. Nakano, Performances of platinum metal catalysts supported on titania coated silica prepared from metal organics 33/34 (1988) 269
- S. Nishiyama, K. Yoshioka, T. Yoshida, S. Tsuruya and M. Masai, Highly active surfaces of noble metals by thermal treatment under UHV 33/34 (1988) 1081

### Polar surfaces

Xun Wang, Investigation of atomic and electronic structures of InP polar surfaces 33/34 (1988) 88

#### Porous materials

- H. Morisaki and K. Yazawa, Electrochemical and electrochromic aspects of porous titania glass 33/34 (1988) 818
- T. Ito, A. Hiraki and M. Satou, Metal reactions to anodized porous silicon crystals 33/34 (1988) 1127

# Post-deposition annealing

S. Higuchi, M. Ushio, Y. Nakanishi and K. Takahashi, The structural changes of ZnS:Mn thin films with post-deposition annealing 33/34 (1988) 667

# Pulsed molecular beam epitaxy

A. Sandhu, Y. Nakata, S. Sasa and S. Hiyamizu, In<sub>0.53</sub>Ga<sub>0.47</sub>As-In<sub>0.52</sub>
(Ga<sub>1-x</sub>Al<sub>x</sub>)<sub>0.48</sub>As quasi-parabolic (multi-stepped) quantum wells grown by the pulsed molecular beam method

33/34 (1988) 400

# Quantum wells

A. Sandhu, Y. Nakata, S. Sasa and S. Hiyamizu,  $In_{0.53}Ga_{0.47}As-In_{0.52}$  ( $Ga_{1-x}Al_x$ )<sub>0.48</sub> As quasi-parabolic (multi-stepped) quantum wells grown by the pulsed molecular beam method 33/34 (1988) 400

# Quartz crystal oscillator

E. Nishikawa, T. Sugita, S. Ebisawa, M. Tsujimoto, H. Ohki, Y. Kamimura and S. Hanashima, Industrial fine adjustment of the resonant frequency of a quartz crystal wafer by Penning discharge sputtering 33/34 (1988) 685

# Raman scattering

M. Osawa, S. Yamamoto and W. Suëtaka, Surface enhanced Raman scattering of molecules within small cavities in evaporated silver films 33/34 (1988) 890

# Raman spectroscopy

- Y. Shigesato, A. Murayama, T. Kamimori and K. Matsuhiro, Characterization of evaporated amorphous WO<sub>3</sub> films by Raman and FTIR spectroscopies 33/34 (1988) 804
- Y. Ozaki, K. Iriyama, T. Iwasaki and H. Hamaguchi, Resonance Raman study of mono- and multilayer Langmuir–Blodgett films of merocyanine J-aggregates 33/34 (1988) 1317
- K. Ishii, S. Mitsumura, Y. Hibino, R. Hagiwara and H. Nakayama, Preparation of phthalocyanine and octacyanophthalocyanine films by CVD on metal surfaces, and in situ observation of the molecular processes by Raman spectroscopy
  33/34 (1988) 1324

33/34 (1988) 1037

#### Rare earth metals

T. Arakawa, N. Suezawa, G. Adachi and J. Shiokawa, Dissociation of CO2 on some rare earth metal thin films 33/34 (1988) 286

### Rare gas atoms

J. Mahanty, N.H. March and B.V. Paranjape, Interaction between rare gas atoms outside metal surfaces: role of plasma excitations 33/34 (1988) 309

# Reflection high energy electron diffraction

- S. Mizuno and A. Ichimiya, RHEED study of alkali metals on Si(111) surface 33/34 (1988)
- H. Yaguchi, S. Baba and A. Kinbara, RHEED study of superstructures of submonolayer lead films on silicon (111) surfaces 33/34 (1988)
- H. Yamaguchi, M. Kawashima and Y. Horikoshi, Migration-enhanced epitaxv 33/34 (1988) 406

# Residual gas

S. Kobayashi, K. Suzuki and T. Katsube, Changes of residual gas species in a vacuum chamber during electron bombardment 33/34 (1988) 370

# Scanning tunneling microscopy

M. Komiyama, J. Kobayashi, Y. Ishigama, S. Morita and N. Mikoshiba, Scanning tunnelling microscopy images of noble metal fine particles supported on thin titanium oxide film 33/34 (1988) 206

# Schottky barrier

- W.E. Spicer, T. Kendelewicz, N. Newman, R. Cao, C. McCants, K. Miyano, I. Lindau, Z. Lilienthal-Weber and E.R. Weber, The advanced unified defect model and its applications 33/34 (1988) 1009
- Y. Uchida, T. Yokotsuka, T. Narusawa and H. Nakashima, Formation and characteristics of LaB, /GaAs(001) Schottky barrier
- M. Suzuki, T. Hayashi, M. Oshima, M. Wada and J. Nakano, Photoemission study of Schottky barriers formed on PbIn alloys by plasma oxidation

# 33/34 (1988) 1051

#### Schottky barrier photodiodes

T. Sukegawa, S. Takeuchi, S. Hasegawa, H. Ueno and A. Tanaka, Measurement of optical-absorption coefficient and minority carrier diffusion length in GaAs<sub>1-x</sub>P<sub>x</sub> Schottky-barrier photodiodes 33/34 (1988) 1044

#### Secondary ion mass spectroscopy

M. Inoue, Y. Sugiyama, S. Nishigaki and T. Noda, Sequential SIMS-ISS measurements using a double focusing mass spectrometer 33/34 (1988) 138

#### Selenium

S. Nagashima and I. Ogura, The structure of overlayers of Se on Cu(111) surfaces 33/34 (1988) 450

#### Semiconductors

- V.A. Grazhulis, New results in low temperature studies of semiconductor surfaces 33/34 (1988)
- F. Sanchez-Quesada, C. Case, G. Gonzalez-Diaz, I. Martil, J. Santamaria, E. Iborra, R. Beaulieu and J.J. Loferski, Effects of argon partial pressure and hydrogen admixtures on the properties of sputtered CuInSe<sub>2</sub> thin films
  33/34 (1988) 844

# Silicides

T.T. Tsong, Atomic structure and compositional analysis of solid surfaces using pulsed-laser ToF atom-probe and field ion microscopy 33/34 (1988) 15

### Silicon

- V.A. Grazhulis, New results in low temperature studies of semiconductor surfaces

  33/34 (1988)
- B.A. Nesterenko, Si(110) + Ni system: structural, vibrational and electronic properties
  33/34 (1988) 23
- T. Yamaguchi and K. Harada, Lattice vibrations and thermal diffuse scattering in low-energy-electron-diffraction of the Si(111)2 × 1 structure 33/34 (1988) 31
- ing in low-energy-electron-diffraction of the signal 2x1 structure 35/34 (1986) 31
  S. Mizuno and A. Ichimiya, RHEED study of alkali metals on Si(111)
  surface 33/34 (1988) 38
- S. Kohmoto and A. Ichimiya, Adsorption and desorption of Ag on the Si(111) surface 33/34 (1988)
- M. Watamori, T. Nakahara, K. Oura, F. Shoji and T. Hanawa, Structural change of Si(100) and (111) surfaces after Ag deposition studied by MeV ion channeling
   51
   F. Shoji, T. Kuroi, M. Watamori, K. Oura and T. Hanawa, Capture of Ag
- atoms in defects produced by low-energy Ar<sup>+</sup> ion bombardment on the
  Si(111) surface

  33/34 (1988) 58

  T. Urano and T. Kanaji. Structures of iron films deposited on Si(111)7 × 7

33/34 (1988)

33/34 (1988) 457

33/34 (1988) 492

75

- T. Urano and T. Kanaji, Structures of iron films deposited on Si(111)7 × 7 surface studied by LEED 33/34 (1988)
- H. Yaguchi, S. Baba and A. Kinbara, RHEED study of superstructures of submonolayer lead films on silicon (111) surfaces
- H. Hirayama, S. Baba and A. Kinbara, Electron energy loss measurements of In/Si(111) superstructures: correlation of the spectra with surface superstructures
- structures 33/34 (1988) 193
  C. Satoko, S. Ohnishi and Tian Zeng-ju, Chemisorption and silicide formation processes of transition metals Ti, V, Cr, Fe, and Ni on Si(111) surfaces 33/34 (1988) 277
- C. Tatsuyama, H. Ueba and Y. Kataoka, Heteroepitaxy of Ge films on Si(100) surface
- R. Conrad and M. Harsdorff, Nucleation and growth of silicon on NaCl (100) cleavage planes by RF sputtering

Y. Yasuda, S. Zaima, M. Matsumoto, K. Pak and H. Yonezu, Tunneling injection damage in Si-SiO <sub>2</sub> structures and its correlation with oxidation	
conditions  H. Kinoshita, Low-energy ion etching and oxidation of Si in O <sub>2</sub> magnetron	33/34 (1988) 1066
plasma	33/34 (1988) 1101
T. Ito, A. Hiraki and M. Satou, Metal reactions to anodized porous silicon crystals	33/34 (1988) 1127
M. Utsunomiya and A. Yoshida, Piezoresistive effect of hydrogenated micro- crystalline silicon films	33/34 (1988) 1222
Silicon carbide	
Y. Hamakawa, D. Kruangam, M. Deguchi, Y. Hattori, T. Toyama and H.	
Okamoto, Visible light thin film LED made of a-SiC p-i-n junction Y. Hattori, D. Kruangam, T. Toyama, H. Okamoto and Y. Hamakawa, Highly conductive p-type microcrystalline SiC:H prepared by ECR plasma	33/34 (1988) 1142
CVD	33/34 (1988) 1276
Silicon dioxide	
M. Okuyama, N. Fujiki, K. Inoue and Y. Hamakawa, $SiO_2$ film growth by double-excitation photo-CVD using $Si_3H_8$ and $O_2$	33/34 (1988) 427
Silicon nitride	
K. Murakami, T. Takeuchi, K. Ishikawa and T. Yamamoto, Characterization of silicon nitride films formed in an RF glow discharge	33/34 (1988) 742
T. Kamada, T. Hirao, M. Kitagawa, K. Setsune, K. Wasa and T. Izumi, Annealing behavior of silicon nitride and silicon oxynitride films pre- pared by ECR plasma CVD method	33/34 (1988) 1094
Silicon oxynitride	
A.E.T. Kuiper, M.F.C. Willemsen, J.M.G. Bax and F.H.P.H. Habraken,	
Oxidation behaviour of LPCVD silicon oxynitride films	33/34 (1988) 757
J.B. Oude Elferink, F.H.P.M. Habraken, W.F. van der Weg and A.E.T. Kuiper, Hydrogen in oxidized silicon oxynitride thin films	33/34 (1988) 765
T. Kamada, T. Hirao, M. Kitagawa, K. Setsune, K. Wasa and T. Izumi, Annealing behavior of silicon nitride and silicon oxynitride films pre-	
pared by ECR plasma CVD method	33/34 (1988) 1094
Silver	
S. Kohmoto and A. Ichimiya, Adsorption and desorption of Ag on the Si(111) surface	33/34 (1988) 45
M. Fukui and K. Oda, Studies on metal film growth through instantaneously	, , , , , , , , , , , , , , , , , , , ,
observed attenuated total reflection spectra	33/34 (1988) 882
Sodium chloride	
T. Ota and T. Itagaki, Relationships between the initial growth of a Ga film and the surface structure of cleaved (100)NaCl	33/34 (1988) 484
and the surface structure of cleaver (100), raci	33/34 (1700) 404

#### Solar cells

F. Sanchez-Quesada, C. Case, G. Gonzalez-Diaz, I. Martil, J. Santamaria, E. Iborra, R. Beaulieu and J.J. Loferski, Effects of argon partial pressure and hydrogen admixtures on the properties of sputtered CuInSe<sub>2</sub> thin films

33/34 (1988) 844

### Sputtering

M. Okuyama, Y. Togami and Y. Hamakawa, Microwave effect in RF magnetron sputtering of PbTiO<sub>3</sub>

33/34 (1988) 625 attered indium-tin oxide films 33/34 (1988) 913

K. Ito and T. Nakazawa, Atom-beam sputtered indium—tin oxide films Y. Igasaki, M. Ishikawa and G. Shimaoka, Some properties of Al-doped ZnO transparent conducting films prepared by RF reactive sputtering

33/34 (1988) 926

S. Saito, T. Maeda, T. Soumura and K. Takeda, Temperature variation of the work function of sputter cleaned polycrystalline cobalt

33/34 (1988) 1088

K. Ishii, S. Handa and H. Terauchi, Sputtering of Cu in a high pressure atmosphere

33/34 (1988) 1107

Y. Suzuki, T. Yotsuya, K. Takiguchi, M. Yoshitake and S. Ogawa, The effect of charged particles when preparing ZnO thin film by ion beam sputtering deposition

33/34 (1988) 1114

K. Nishimori, K. Kajio, H. Tokutaka, Y. Noishiki and N. Ishihara, Preparation of magnetron-sputtered Ag-Zn alloy films for an erasable optical-disk

33/34 (1988) 1216

S. Suyama, A. Okamoto and T. Serikawa, High-quality gate-oxide films for MOSFET's deposited by oxygen-argon sputtering

33/34 (1988) 1236

# Staebler-Wronski effect

H. Ohagi, M. Yamazaki, J. Nakata, S. Imao, J. Shirafuji, K. Fujibayashi and Y. Inuishi, Staebler-Wronski effect in a-Si:H films with different morphology

33/34 (1988) 719

### Stearic acid

Y. Saito, K. Inaoka, C. Kaito and M. Okada, Molecular energetics of the growth mechanism of stearic acid thin films prepared by vacuum-deposition.

33/34 (1988) 1298

#### Superconductivity

M. Akinaga and T. Ueno, Possible high  $T_c$  superconductivity and large fluctuation effect in Nb<sub>3</sub>Ge films

33/34 (1988) 1269

#### Superlattices

M. Zinke-Allmang and L.C. Feldman, A novel technique to determine hetero-surface diffusion in semiconductor systems

33/34 (1988) 395

H. Fujiyasu, T. Sasaya, M. Katayama, K. Ishino, A. Ishida, H. Kuwabara, Y. Nakanishi and G. Shimaoka, Properties of CdS-ZnS superlattices prepared by hot wall epitaxy

33/34 (1988) 854

A. Ishida, Y. Sase and H. Fujiyasu, Optical properties of PbTe/Pb<sub>1-x</sub>Eu<sub>x</sub>Te superlattices prepared by hot wall epitaxy 33/34 (1988) 868 Y. Kawakami, T. Taguchi and A. Hiraki, Interface characteristics and excitonic emissions in ZnSe-ZnSSe superlattices fabricated by low-pressure MOCVD 33/34 (1988) 1059 Superstructures H. Yaguchi, S. Baba and A. Kinbara, RHEED study of superstructures of 33/34 (1988) 75 submonolayer lead films on silicon (111) surfaces Supported catalysts K. Matsuo and K. Nakano, Performances of platinum metal catalysts 33/34 (1988) 269 supported on titania coated silica prepared from metal organics Surface cluster models K. Hermann and P.S. Bagus, Size dependence of chemisorptive properties based on surface cluster models: CO/Cu(100) and CO/Al(100) 33/34 (1988) 252 Surface composition analysis Y. Asahara, H. Tokutaka, K. Nishimori, N. Ishihara, N. Makino, J. Le Héricy and J.P. Langeron, Surface composition analysis of Au-Cu alloy by micro-Auger electron spectroscopy 33/34 (1988) 107 Surface reactions M. Sato, FEM study of surface diffusion of the O2-W adsorption system 33/34 (1988) 348 S. Nishiyama, K. Yoshioka, T. Yoshida, S. Tsuruya and M. Masai, Highly 33/34 (1988) 1081 active surfaces of noble metals by thermal treatment under UHV M. Iwami, M. Hirai and M. Kusaka, Existence of an alloy formation reaction in the noble metal (thin film)-CdS (cleaved surface) contact system at 33/34 (1988) 1120 room temperature T. Ito, A. Hiraki and M. Satou, Metal reactions to anodized porous silicon 33/34 (1988) 1127 M. Nunogaki, H. Suezawa, K. Hayasi and K. Miyazaki, Plasma source 33/34 (1988) 1135 nitriding Surface reconstruction T.T. Tsong, Atomic structure and compositional analysis of solid surfaces 33/34 (1988) using pulsed-laser ToF atom-probe and field ion microscopy B.A. Nesterenko, Si(110) + Ni system: structural, vibrational and electronic properties 33/34 (1988) 21 H. Namba, M. Masuda and H. Kuroda, Electronic states of 2 × 1 recon-33/34 (1988) 187 structed surfaces of diamond(111) studied by UPS and EELS

### Surface segregation

I. Katayama, F. Shoji, K. Oura and T. Hanawa, An ISS/AES study of surface segregation of Cu-Mn and Cu-Ag alloy films in-situ deposited onto low temperature W substrates
33/34 (1988) 129

# Surface structure, see also Low energy electron diffraction

- T. Urano and T. Kanaji, Structures of iron films deposited on Si(111)7 × 7 surface studied by LEED 33/34 (1988) 6
- T. Yasue, A. Ichimiya and S. Ohtani, Electron stimulated desorption ion angular distribution (ESDIAD) from LiF surface
- R. Konishi, Y. Kobayashi and H. Sasakura, Surface structure analysis of titanium and amorphous TiFe by SEELFS and EAPFS 33/34 (1988) 173

33/34 (1988) 167

33/34 (1988) 286

33/34 (1988) 379

33/34 (1988) 413

33/34 (1988) 420

33/34 (1988) 427

33/34 (1988) 434

S. Nishiyama, K. Yoshioka, T. Yoshida, S. Tsuruya and M. Masai, Highly active surfaces of noble metals by thermal treatment under UHV 33/34 (1988) 1081

# Synchrotron radiation photoemission spectroscopy

- Y. Yamada, M. Oshima, S. Maeyama, T. Kawamura and T. Miyahara, Determination of Ca-As bonding at the CaF<sub>2</sub>/GaAs interface 33/34 (1988) 1073
- M. Oshima, Y. Kobayashi, T. Kawamura, S. Maeyama, Y. Shinoda and T. Miyahara, Synchrotron radiation photoemission spectroscopy of Ga-in-sulator interfaces for GaAs lateral epitaxial growth 33/34 (1988) 1168

### Tellurium

J. Sunada, K. Okamoto, K. Oishi and S. Shimazu, UV photo-oxidation of Te films (photon energy dependence) 33/34 (1988) 434

# Ternary compounds

M. Kumagawa, T. Ozawa and Y. Hayakawa, A new technique for the growth of III-V mixed crystal layers 33/34 (1988) 611

# Thin films

- T.T. Tsong, Atomic structure and compositional analysis of solid surfaces using pulsed-laser ToF atom-probe and field ion microscopy

  33/34 (1988)

  T. Arekawa, N. Surgawa, G. Adachi, and J. Shickawa, Dissociation of CO.
- T. Arakawa, N. Suezawa, G. Adachi and J. Shiokawa, Dissociation of CO<sub>2</sub> on some rare earth metal thin films
- J.L. Robins, Thin film nucleation and growth kinetics
- N. Itoh, K. Okamoto, H. Ogawa, T. Kawabata and S. Koike, Strains in ZnS<sub>x</sub>Se<sub>1-x</sub> films grown on (001)-GaAs substrates
- T. Inushima, N. Hirose, K. Urata, T. Sato and S. Yamazaki, Film growth mechanism of photo-chemical vapor deposition
- M. Okuyama, N. Fujiki, K. Inoue and Y. Hamakawa, SiO<sub>2</sub> film growth by double-excitation photo-CVD using Si<sub>3</sub>H<sub>8</sub> and O<sub>2</sub>
- J. Sunada, K. Okamoto, K. Oishi and S. Shimazu, UV photo-oxidation of Te films (photon energy dependence)

V V 1 1 V V 111 C 4 1		
Y. Yamada and K. Yoshida, Growth and structure of titanium eva films	33/34 (1988)	465
N. Tanaka and K. Mihama, High resolution electron microscopy and		405
diffraction of metal-MgO composite films	33/34 (1988)	472
K. Yoshida and T. Yamada, Long-period crystal lattices in thin Bi-M	In alloy	
films prepared by successive and simultaneous vacuum depositio	ns 33/34 (1988)	516
A. Sawabe, H. Yasuda, T. Inuzuka and K. Suzuki, Growth of diame	ond thin	
films in a DC discharge plasma	33/34 (1988)	539
H. Kaneko, M. Kamada, R. Kuwae, A. Sawabe and T. Inuzuka, Influ		
substrate- and atmospheric-temperatures on diamond deposition	33/34 (1988)	546
A. Chayahara, H. Yokoyama, T. Imura, Y. Osaka and M. Fujisawa,		563
ties of BN thin films deposited by plasma CVD  M. Motovama, K. Ishima, M. Kashihara and S. Koshiba, Format	33/34 (1988)	201
structure of ceramic thin films deposited by ion beam sputtering	33/34 (1988)	567
S. Higuchi, M. Ushio, Y. Nakanishi and K. Takahashi, The st		307
changes of ZnS:Mn thin films with post-deposition annealing	33/34 (1988)	667
D. Haneman and D.H. Zhang, Special conductivity effects in amo		007
hydrogenated silicon	33/34 (1988)	692
Y. Hamakawa, Current status of a-Si technology and its applica-	, , ,	
optoelectronic devices	33/34 (1988)	705
H. Ohagi, M. Yamazaki, J. Nakata, S. Imao, J. Shirafuji, K. Fujibaya	ish 'nd	
Y. Inuishi, Staebler-Wronski effect in a-Si:H films with differe	nt sor-	
phology	33/34 (1988)	719
S.G. Meikle, Y. Hatanaka, Y. Suzuki and G. Shimaoka, Energ	*	
discontinuities in the a-SiN <sub>x</sub> /c-Si heterojunction	33/34 (1988)	750
A.E.T. Kuiper, M.F.C. Willemsen, J.M.G. Bax and F.H.P.H. Ha		757
Oxidation behaviour of LPCVD silicon oxynitride films  J.B. Oude Elferink, F.H.P.M. Habraken, W.F. van der Weg and	33/34 (1988)	131
Kuiper, Hydrogen in oxidized silicon oxynitride thin films	33/34 (1988)	765
G. Shimaoka, Y. Suzuki and Y. Hatanaka, XPS study of a-Si, O,		103
a-Si, N <sub>w</sub> :H thin films	33/34 (1988)	784
Y. Hatanaka, S. Kawai, Y. Suzuki, Y. Asai and G. Shimaoka,	, , , , , ,	
nitride/amorphous silicon interfaces in an MIS junction	33/34 (1988)	792
M. Hashimoto and M. Matui, Effect of thin metal sublayers on the	stability	
of the amorphous phase of antimony layers	33/34 (1988)	826
P. Dzwonkowski, C. Julien and M. Balkanski, Structural and el	ectrical	
properties of lithio-borate solid electrolyte thin films	33/34 (1988)	838
F. Sanchez-Quesada, C. Case, G. Gonzalez-Diaz, I. Martil, J. Santam		
Iborra, R. Beaulieu and J.J. Loferski, Effects of argon partial p		
and hydrogen admixtures on the properties of sputtered CuIns		044
films	33/34 (1988)	844
S. Yamauchi and T. Hariu, Photoelectronic properties of ZnSe films by plasma-assisted epitaxy in mixed plasma gas H <sub>2</sub> + N <sub>2</sub>	_	063
M. Osawa, S. Yamamoto and W. Suëtaka, Surface enhanced Raman	33/34 (1988)	002
ing of molecules within small cavities in evaporated silver films	33/34 (1988)	890
Y. Igasaki, M. Ishikawa and G. Shimaoka, Some properties of Al-dope		070
transparent conducting films prepared by RF reactive sputtering	33/34 (1988)	926
F.K. Urban III, Ellipsometer measurement of thickness and optical		
ties of thin absorbing films	33/34 (1988)	934
C. Sella and J. Lafait, Adjustable selective profiles using cermet ab	sorbing	
films	33/34 (1988)	942

F.E. Girouard, VV. Truong and T. Yamaguchi, Optical properties of	33/34(1988) 959
granular copper systems  S. Nonaka and A. Kakimoto, Dielectric property measurements of thin film	
specimens K. Ishii, S. Handa and H. Terauchi, Sputtering of Cu in a high pressure	33/34 (1988) 980
atmosphere	33/34 (1988) 1107
Y. Suzuki, T. Yotsuya, K. Takiguchi, M. Yoshitake and S. Ogawa, The effect of charged particles when preparing ZnO thin film by ion beam sputter-	
ing deposition  Jiang Ji-bing. An experimental study of thin film layers in channel electron	33/34 (1988) 1114
multipliers	33/34 (1988) 1183
C. Sella, K. Youn, R. Barchewitz, M. Arbaoui and R. Krishnan, Structure	
and properties of W/C and Ni/C multilayer films	33/34 (1988) 1208
S. Suyama, A. Okamoto and T. Serikawa, High-quality gate-oxide films for MOSFET's deposited by oxygen-argon sputtering	33/34 (1988) 1236
M. Balkanski, Thin film technology for solid-state batteries	33/34 (1988) 1260
M. Akinaga and T. Ueno, Possible high T <sub>c</sub> superconductivity and large	, , ,
fluctuation effect in Nb <sub>3</sub> Ge films	33/34 (1988) 1269
R.D.L. Kristensen, S.N. Sahu and D. Haneman, Thin films of CuInSe <sub>2</sub> for photoelectrochemical cells by flash evaporation	33/34 (1988) 1285
Y. Saito, K. Inaoka, C. Kaito and M. Okada, Molecular energetics of the	33/34 (1986) 1283
growth mechanism of stearic acid thin films prepared by vacuum-deposi-	
tion	33/34 (1988) 1298
K. Ishii, S. Mitsumura, Y. Hibino, R. Hagiwara and H. Nakayama, Preparation of phthalocyanine and octacyanophthalocyanine films by CVD on	
metal surfaces, and in situ observation of the molecular processes by	
Raman spectroscopy	33/34 (1988) 1324
Titania glass	
H. Morisaki and K. Yazawa, Electrochemical and electrochromic aspects of	
porous titania glass	33/34 (1988) 818
Titanium	
R. Konishi, Y. Kobayashi and H. Sasakura, Surface structure analysis of	
titanium and amorphous TiFe by SEELFS and EAPFS	33/34 (1988) 173
Y. Yamada and K. Yoshida, Growth and structure of titanium evaporated	22 /24 /1099\ 465
films	33/34 (1988) 465
Titanium selenide	
C. Kaito, T. Doi, Y. Saito, K. Tanaka and K. Fujita, Studies on the structure	
and the crystallization process of ion sputtered TiSe <sub>2</sub> films	33/34 (1988) 509
Total reflection spectroscopy	
M. Fukui and K. Oda, Studies on metal film growth through instantaneously	
M. Fukui and K. Oda, Studies on metal film growth through instantaneously observed attenuated total reflection spectra	33/34 (1988) 882

### Tungsten oxide

M. Kitao, S. Yamada, Y. Hiruta, N. Suzuki and K. Urabe, Electrochromic absorption spectra modulated by the composition of WO<sub>3</sub>/MoO<sub>3</sub> mixed films

33/34 (1988) 812

### Tungsten silicide

H. Miyatake, T. Nishioka, H. Ito, H. Koyama, S. Kawazu and M. Nomura, EXAFS study on tungsten silicide films

33/34 (1988) 160

J.-R. Chen, Y.-K. Fang and S.-L. Hsu, Investigations of the growth of tungsten and tungsten silicides on SiO<sub>2</sub> substrates by low pressure CVD method

33/34 (1988) 578

# Ultrafine particles

M. Takeuchi, K. Inoue, S. Ozawa and H. Nagasaka, Photoconductive properties of ultrafine indium oxide particle layers

33/34 (1988) 905

# Unified defect model

W.E. Spicer, T. Kendelewicz, N. Newman, R. Cao, C. McCants, K. Miyano, I. Lindau, Z. Lilienthal-Weber and E.R. Weber, The advanced unified defect model and its applications

33/34 (1988) 1009

### Vacuum deposition

K. Mihama, N. Tanaka and Y. Saito, Growth of Al-Mn quasi-crystals by vacuum deposition

33/34 (1988) 531

## Vapour phase epitaxy

T. Imai, S. Fuke, K. Kasai and K. Kuwahara, Iodine-doping effects on the hetero-epitaxial growth of ZnS on GaP substrate using VPE method

33/34 (1988) 654

#### Work function

R.W. Vook, T.J. Swirbel and S.S. Chao, Work function changes in the (111)Pd/(111)Cu and CO/(111)Pd/(111)Cu systems

33/34 (1988) 220

S. Saito, T. Maeda, T. Soumura and K. Takeda, Temperature variation of the work function of sputter cleaned polycrystalline cobalt

33/34 (1988) 1088

C.S. Fang, W.S. Tse and C. Maloney, Re/Ir/W and Os/Ir/W alloy coatings on impregnated tungsten cathodes

33/34 (1988) 1189

### X-ray photoelectron spectroscopy

I. Alstrup and P.J. M

øller, X-ray photoelectron spectroscopy study of the vapor deposition of copper onto a MgO(100) surface

33/34 (1988) 143

G. Shimaoka, Y. Suzuki and Y. Hatanaka, XPS study of a-Si<sub>x</sub>O<sub>y</sub>:H and a-Si<sub>x</sub>N<sub>y</sub>:H thin films

33/34 (1988) 784

Y. Nakayama, T. Takahagi, F. Soeda, A. Ishitani, M. Shimomura, K. Okuyama and T. Kunitake, XPS study of oriented organic molecules. The single crystal of an arobenzene-containing alkyl ammonium amphiphile 33/34 (1988) 1307 Zinc oxide K. Matsumoto, T. Havashi, M. Honjo and G. Shimaoka, The role of water vapor adsorbed on the surface in the growth of ZnO crystal 33/34 (1988) 342 T. Arakawa and G. Shimaoka, The epitaxial growth of ZnO thin films on 33/34 (1988) 501 cubic substrates Y. Igasaki, M. Ishikawa and G. Shimaoka, Some properties of Al-doped ZnO transparent conducting films prepared by RF reactive sputtering 33/34 (1988) 926 Y. Suzuki, T. Yotsuya, K. Takiguchi, M. Yoshitake and S. Ogawa, The effect of charged particles when preparing ZnO thin film by ion beam sputtering deposition 33/34 (1988) 1114 Zinc phosphide T. Imai, S. Fuke, S. Kawarabayashi and K. Kuwahara, X-ray diffraction studies on polycrystalline Zn<sub>3</sub>P<sub>2</sub> films deposited by hot-wall method 33/34 (1988) 594 Zinc selenide S. Yamauchi and T. Hariu, Photoelectronic properties of ZnSe films grown by plasma-assisted epitaxy in mixed plasma gas H<sub>2</sub> + N<sub>2</sub> 33/34 (1988) 862 Y. Kawakami, T. Taguchi and A. Hiraki, Interface characteristics and excitonic emissions in ZnSe-ZnSSe superlattices fabricated by low-pressure MOCVD 33/34 (1988) 1059 Zinc sulphide T. Imai, S. Fuke, K. Kasai and K. Kuwahara, Iodine-doping effects on the hetero-epitaxial growth of ZnS on GaP substrate using VPE method 33/34 (1988) 654 H. Uchiike, S. Hirao, K. Ohishi and Y. Fukushima, Characterization of electron beam evaporated ZnS:Mn thin films by using particle induced X-ray emission analysis 33/34 (1988) 661 S. Higuchi, M. Ushio, Y. Nakanishi and K. Takahashi, The structural changes of ZnS:Mn thin films with post-deposition annealing 33/34 (1988) 667

### Zinc sulphoselenide

N. Itoh, K. Okamoto, H. Ogawa, T. Kawabata and S. Koike, Strains in  $ZnS_xSe_{1-x}$  films grown on (001)-GaAs substrates 33/34 (1988) 413

